

DHANANI SCHOOL OF SCIENCE AND ENGINEERING



BS

COMPUTER ENGINEERING



AAMAINA M. TAHIR ALI

BS Computer Engineering

✉ amenamukarram10@gmail.com

☎ +923312853527  LinkedIn

"Computer Engineering student passionate about embedded systems, AI, and IoT. Driven to build intelligent, real-world solutions, I aim to pursue innovative engineering roles bridging hardware, data, and scalable technologies."

Core Skills

- Aws/Cloud Computing
- C++
- Embedded Systems (Arduino/STM32/ESP32)
- Machine Learning (Scikit-Learn, TensorFlow)
- Python
- IoT Systems

Leadership & Co-Curricular Activities

PR Cabinet Member,
Habib University Student Government

HUCON Volunteer,
Multiverse Club

Community Work,
Serve Club

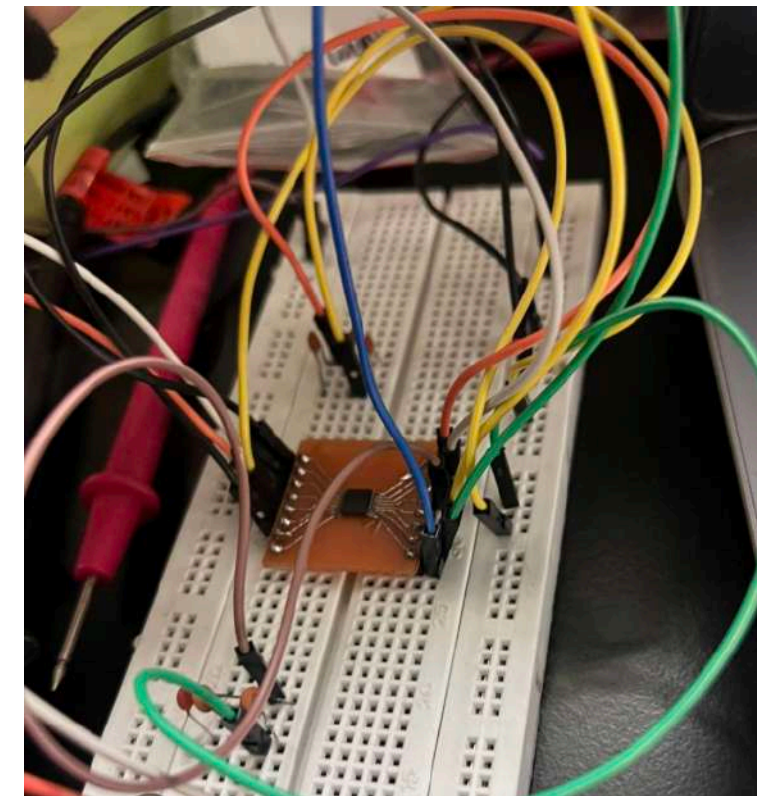
Employment Experience

10 Pearls,
Data Science Intern
(June – August 2025)

Final Year Project

Non-Destructive Testing of Foam in Refrigerator Cabinets

Developed an ultrasonic NDT system to detect internal voids in polyurethane foam using time-of-flight measurements. The system integrates a PGA460 analog front end with an STM32 microcontroller for high-speed data acquisition and real-time signal processing. A DSP pipeline with bandpass filtering and cross-correlation extracts features from ultrasonic echoes to identify defects with high accuracy. Designed using Zephyr RTOS for efficient task management, the solution aims to reduce material waste, improve quality control, and enable cost savings in industrial manufacturing processes.





AATIKA ARSHAD

BS Computer Engineering

 arshadaatika@gmail.com

 +923022769152  LinkedIn

"I am an engineering student interested in robotics, design thinking, undergraduate research, and project management. I aim to build a career in the Human-Centered Design field."

Core Skills

- C++
- Matlab
- Python
- Sketching & Concept Visualization
- Solidworks

Core Competencies

Effective Presentation Skills; Problem Solving

Employment Experience

Undergraduate Researcher,
Habib University
(June – August 2026)

Undergraduate Researcher,
Habib University
(June – August 2025)

Final Year Project

AI-Based Teaching Platform for Primary Education

Large Language Models (LLMs) have strong potential in education but face two major limitations: mathematical hallucinations and lack of proper teaching alignment. When AI tutors provide direct answers, students may not develop problem-solving skills. A Socratic tutoring approach helps by guiding learners through hints and questions instead of giving immediate solutions, but generative models may still produce incorrect reasoning. To address this, the paper introduces SocraticTutorPK, an LLM-based tutor for Grade 5 mathematics. The system combines Socratic pedagogy, symbolic mathematical verification, and human preference alignment. The Microsoft Phi-4 model is fine-tuned on a curated dataset of Socratic dialogues, with a mathematical verifier and teacher-student feedback applied to improve accuracy and teaching quality.





ABDULLAH AMIR

Ismat & Mustafa Kassam HU TOPS Scholar

BS Computer Engineering

✉️ abdullah.119.amir@gmail.com

☎️ +923221761872 [in](#) LinkedIn

"I want to do innovative work at the intersection of AI and hardware, building something physical and tangible that can help improve the quality of human life and uplift society."

Core Skills

- C/C++
- MATLAB
- PyTorch
- Python
- Vivado
- Vitis

Core Competencies

Adaptability

Academic Awards

Dean's List 2023, 2025

Leadership & Co-Curricular Activities

Treasurer,
Math Club

Chess Representative,
Sports & Recreational Club

Employment Experience

Undergraduate Researcher,
Habib University
(January 2025 – April 2026)

Teaching Assistant – Data
Communication and Networking,
Habib University
(September – December 2025)

Summer Undergraduate Researcher,
Habib University
(June – August 2025)

Summer Undergraduate Researcher,
Habib University
(June – August 2024)

Final Year Project

Hardware-Accelerated EMG-Based Transformer Model for Hand Pose Tracking

This project develops a hardware-accelerated system that tracks continuous hand motion from bio-signals generated during muscle activity. It leverages a lightweight and quantized Transformer model which is pre-trained on non-invasive surface EMG (Electromyography) data to learn human kinematics. The model is deployed onto a low-cost, Xilinx Zedboard FPGA to tap its inherent parallelism and achieve ultra-low latency required for real-time interaction via high-speed processing, while the output kinematics are streamed to Unity for 3D visualization. The purpose of the project is to deliver a scalable edge-AI framework for advanced prosthetics using hardware-software co-design, bridging the gap between simulated biomechanics and real-world hardware deployment.





ABDULLAH KHALID

Towfiq Chinoy & Family HU TOPS Scholar
BS Computer Engineering

✉ akkn30284@gmail.com

☎ +923323328844  LinkedIn

"Computer Engineer and Unity Game Developer with experience across 20+ projects, specializing in Game Architecture & Optimization. Also interested in reverse engineering in Ghidra utilizing AI/ML refined workflows."

Core Skills

- AWS
- C#
- C++
- C/C++
- Firebase
- Ghidra
- Python (Pytorch/Tensorflow)
- SQL
- Unity

Core Competencies

Adaptability; Planning; Takes Initiative

Leadership & Co-Curricular Activities

HU Football Team Member,
Sports & Recreational Club

Employment Experience

Freelance (Game Dev/Reverse Engineer),
Upwork
(August 2024 – March 2026)

Game Developer,
Happy Tube
(February – July 2025)

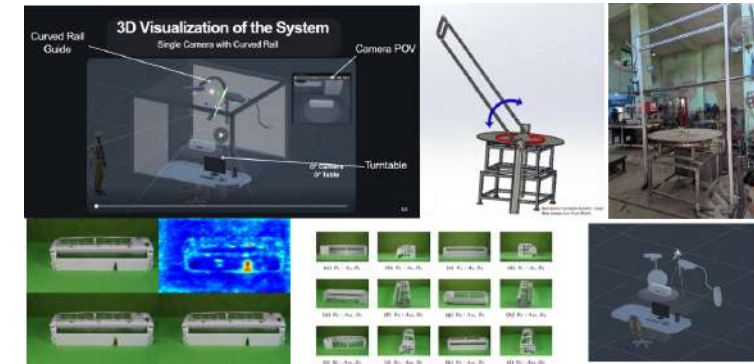
Game Developer,
Renderz Studio
(September 2023 – January 2025)

Final Year Project

Aesthetic Fault Detection in Injection Molded Parts

An automated inspection system that uses one camera to fully inspect large plastic parts for scratches and defects, solving a problem that typically requires multiple expensive cameras. By moving both the part and the camera in a coordinated way, we capture every angle with a single sensor, then train our AI on only good parts to spot flaws. Tested on real factory parts, it caught 100% of defects with zero missed items, running in under 3 minutes per part. The key innovation? Smart mechanical design lets one camera do the work of many, making high-quality inspection affordable and practical for real manufacturing lines.

Research Paper @CVC:
<https://drive.google.com/file/d/1xkG45BuIPNVAbkD6UKe3FyeQRzO/view?usp=sharing>





AHMED A. MUJTABA

BS Computer Engineering

✉ ahmedmujtaba823@gmail.com

☎ +923331272798 LinkedIn

"I am passionate about hardware verification and RTL design. My RISC-V verification research at Harvey Mudd College solidified my path — I intend to grow as a chip verification engineer."

Core Skills

- C
- C++
- C#
- Matlab
- Python
- QA
- Unreal
- Unity
- Verilog

Core Competencies

Drive for Results; Takes Initiative

Academic Awards

High Academic Leap Scholarship 2024

Employment Experience

Simulation Engineer,
Woot Tech
(February 2026 – January 2027)

Undergraduate Researcher,
Habib University
(January – May 2026)

Teaching Assistant,
Habib University
(August – December 2025)

Teaching Assistant,
Habib University
(January – April 2025)

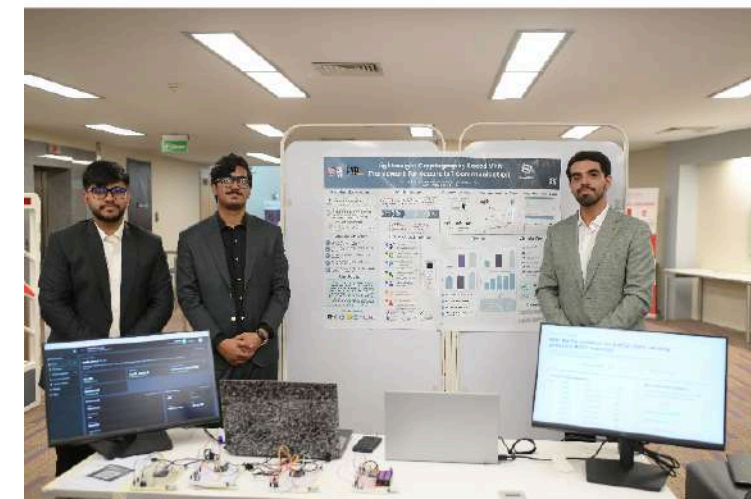
Final Year Project

LWC VPN for IoT

My Final Year Project involves developing a lightweight VPN for resource-constrained IoT devices (ESP32-class). Standard VPN solutions are too heavy for low-power embedded hardware, leaving IoT deployments vulnerable to man-in-the-middle attacks and data interception. Our VPN achieves secure end-to-end communication by combining X25519 ECDH for key exchange, HKDF for session key derivation, and Ascon — the NIST Lightweight Cryptography winner — as the symmetric cipher. The aim is to minimize handshake overhead, memory footprint, and power consumption while maintaining strong security guarantees. Findings so far show our solution significantly outperforms traditional VPN stacks on embedded hardware across all three metrics, providing a practical, deployable security layer for real-world IoT networks without expensive hardware upgrades.

Publications, Creative Projects & Global Experiences

Publication – Enhancing Campus Safety Education through Immersive Learning: A Constructivist Approach to VR Evacuation Training





AIMEN ASIM

BS Computer Engineering

 aimen.asim@gmail.com

 +923372116807  LinkedIn

"Gained broad exposure to signal processing, wireless and wired communications, signal design, embedded systems, communication protocols, and hardware implementation through academic experience at Habib University."

Core Skills

- Arduino
- CAD
- C++
- Python

Core Competencies

Collaborates Openly

Leadership & Co-Curricular Activities

Aided In Writing Papers,
IEEE (Institute of Electrical and
Electronics Engineers)

Employment Experience

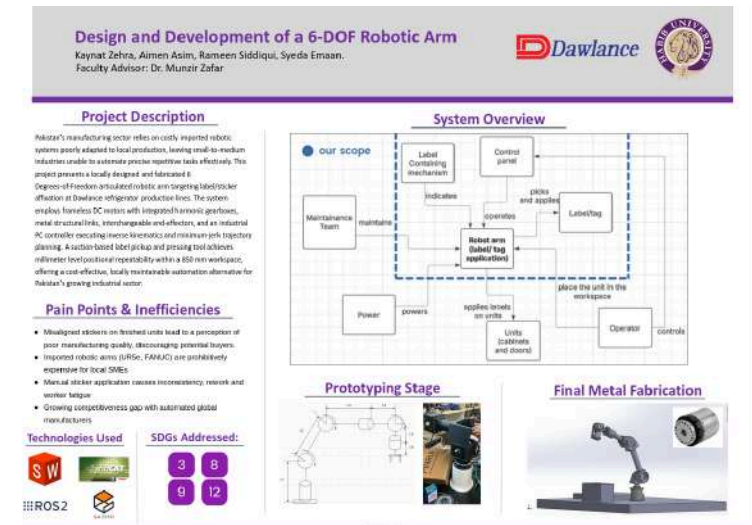
Intern,
Habib University
(June – August 2025)

Intern,
Think Enabled
(June – July 2024)

Final Year Project

6DOF Robotic Arm for Dawlance and Toyota

This project focuses on automating manual processes at Dawlance and Toyota through the development of a precision robot. As such technology is not locally produced in Pakistan and is typically imported at high cost, our team is building a solution from the ground up, encompassing electrical, software, and mechanical design.





BASIL KHOWAJA

Towfiq Chinoy & Family HU TOPS Scholar

BS Computer Engineering

✉ basilkhowaja123@gmail.com

☎ +923352997992  LinkedIn

"Computer Engineering student focused on cloud infrastructure, cybersecurity, and distributed systems. Experienced in AWS, DevOps, and secure application development, motivated to build resilient platforms and advance cloud security practices."

Core Skills

- Agentic Coding and Debugging
- Cloud Deployment
- Web Development

Core Competencies

Adaptability; Agility

Academic Awards

High Academic Leap Scholarship 2025

Leadership & Co-Curricular Activities

Vice President,
Sports & Recreational Club

Volunteer,
Habib University Student Government

Volunteer,
Gaming Club Habib Debate Union

Employment Experience

Software Engineer,
Woot Tech
(February – April 2026)

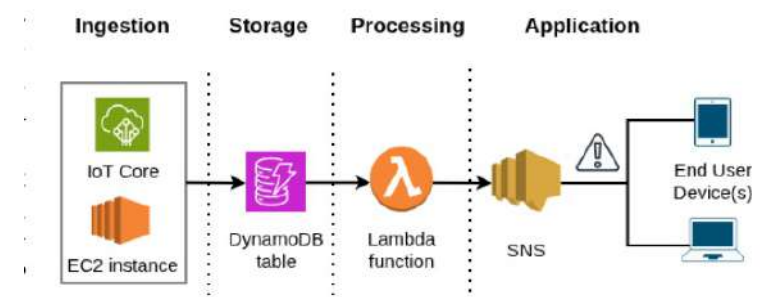
Final Year Project

Lightweight Cryptographic-Based VPN for Secure IoT Communication

My Final Year Project focuses on designing and implementing a lightweight cryptographic framework for secure communication in resource-constrained IoT devices. The system evaluates lightweight encryption algorithms such as ASCON, TinyAES, and SPECK to determine their performance and security suitability for embedded platforms like ESP32. The framework supports modular integration of different cryptographic primitives and enables secure device-to-device communication over constrained networks. Experimental benchmarking is conducted to measure latency, throughput, CPU usage, and memory overhead under different configurations. The goal is to identify efficient cryptographic approaches that maintain strong security while minimizing computational and energy costs, making them practical for real-world IoT deployments.

Publications, Creative Projects & Global Experiences

Publication – Evaluation of IoT Protocol Performance in a Cloud-Enabled Home Safety System





BILAWAL B. ALI

Hilton Pharma Excellence Scholar

BS Computer Engineering

✉ bilawalbarkatali@gmail.com

☎ +923146854894  LinkedIn

"Computer Engineering student motivated by AI, Computer Vision, and Industrial Automation. I intend to pursue a career as an AI/ML engineer."

Core Skills

- Agentic AI & RAG
- AI ML & DL
- Cloud Computing (AWS, S3)
- Computer Vision
- Python

Core Competencies

Planning; Problem Solving; Takes Initiative

Employment Experience

Habib University,
Research Assistant – Summer Tehqiq
Research Program
(May 2025)

Final Year Project

Aesthetic Fault Detection in Injection Molding Parts

For my Final Year Project, I am developing an AI-based Aesthetic Fault Detection System in partnership with Dawlance. The project automates industrial quality control by using unsupervised anomaly detection (PatchCore) and Computer Vision to identify surface defects on home appliances. The system integrates high-resolution Basler cameras and an arm to capture and analyze real-time manufacturing data, replacing manual inspection with a scalable, high-precision deep learning solution.

Publications, Creative Projects & Global Experiences

Publication – Muhammad Manqad Raza, Bilawal Wadani, et al. "Deployment-Oriented Memory-Based Visual Inspection of Injection-Molded Parts." Computer Vision Conference (CVC), Springer Lecture Notes in Networks and Systems, 2026.





FATIMA B. AIJAZ

BS Computer Engineering

✉ yoitsfatimaaijaz@gmail.com

☎ +923312846415 🔗 LinkedIn

"Computer Engineering student excited about integrating hardware and software into tangible products. I'm passionate about IoT, full-stack, and 3D web development, aiming to build innovative tech with an entrepreneurial mindset."

Core Skills

- Arduino
- Django
- IoT
- MATLAB
- Python
- React
- SQL

Core Competencies

Adaptability; Collaborates Openly; Effective Presentation Skills; Encourages Innovation; Problem Solving; Takes Initiative

Leadership & Co-Curricular Activities

Habib University Student Government,
Outstation Student Mentor

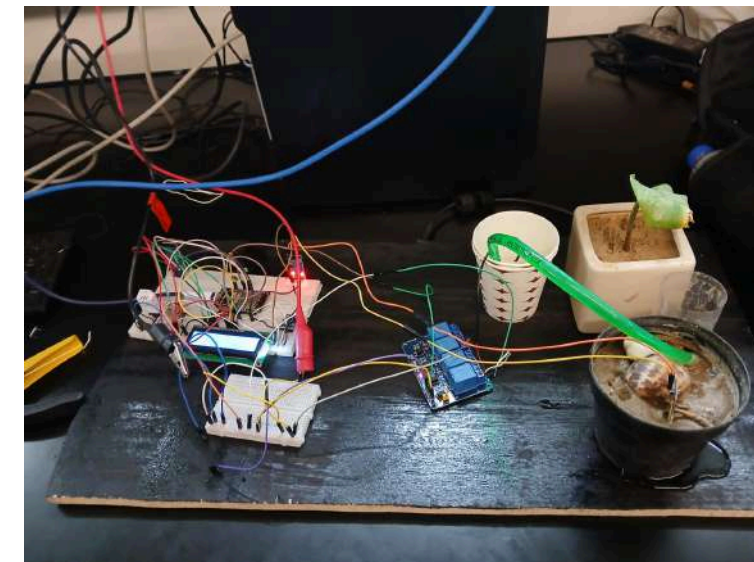
Employment Experience

Habib University,
Muhaqqiq In The Summer Tehqiq
Research Program (STRP)
(June – August 2026)

Final Year Project

AI-Based Teaching Platform for Primary Education

In this final-year research project, we fine-tuned an AI model (phi-4) to enable it to teach Mathematics for primary education in a "Socratic" manner; hinting and guiding the students instead of giving them the answers. We curated our own dataset and fine-tuned it on our online available dataset, then added an external verifier, Mathematica, to improve its mathematical computational accuracy. A Direct Preference Optimization was then employed (asking teachers and students to use the chatbot then saving their preferences) to further domain adapt. In conclusion, the results on Sindh Board Mathematics outperformed those of GPT-5's "study and learn" mode, which is also based on Socratic teaching. Hence, guided reasoning instead of direct answers helps students develop critical thinking skills.





HAMAD A. KHAN

BS Computer Engineering

✉ hasifkhan.447@gmail.com

☎ +923200038835  LinkedIn

"I am passionate about robotics and autonomous systems, with a strong interest in mathematics and optimizing algorithms for limited hardware to enable automation."

Core Skills

- Embedded C++
- Fusion360/Solidworks
- Linux Sysadmin (Git, Bash, Fish)
- Zephyrpython

Core Competencies

Problem Solving

Academic Awards

Dean's List 2023, 2024

President's List 2023, 2024

Leadership & Co-Curricular Activities

President,
Math Club

Events Lead,
Math Club

Employment Experience

Undergraduate Research Assistant,
Habib University
(May – August 2026)

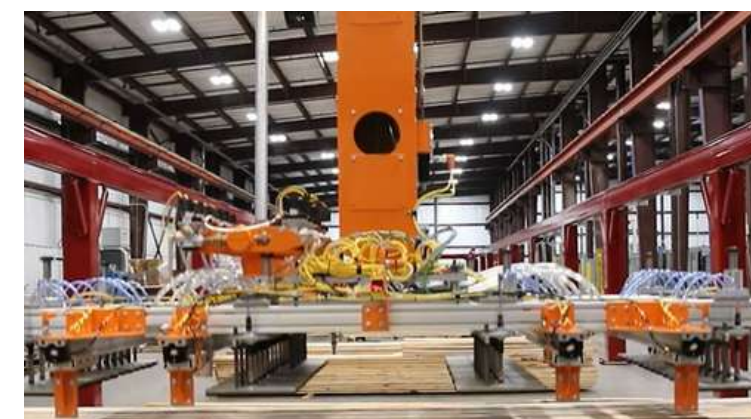
Teaching Assistant - Data Structures
And Algorithms,
Habib University
(August – December 2025)

Undergraduate Research Assistant,
Habib University
(June – August 2024)

Final Year Project

Smart Gantry for Packaging and Palletizing Applications

This project involves building an indigenously designed and manufactured, fully capable gantry system. This system is able to pick and place rectangular objects, package them, close and tape the box, and then stack them on a pallet. This involved an end-to-end design, from product conception to mechanical design, electrical design, and custom algorithms for intelligent operation.





HANIA KASHIF

BS Computer Engineering
Mathematics

✉ haniakashif287@gmail.com

☎ +923158562679  LinkedIn

"I am passionate about Robotics, Embedded Systems, and Signal Processing. I want to work in Robotics and pursue a Master's degree in the same field after gaining relevant work experience."

Core Skills

- C++
- Gazebo
- Python
- ROS2
- Zephyr RTOS

Core Competencies

Acts with Ownership; Planning; Takes Initiative

Leadership & Co-Curricular Activities

Orientation Leader – New Student Orientation '23

Chair of Academic Affairs,
Habib University Student Government

Marketing Team Member,
Math Club

Security Team Member,
Multiverse Club

Runway Radio Member, Host And
Content Head

Employment Experience

Habib University,
Summer Research Internship
(June – August 2024)

Final Year Project

Legged Robot for Locomotion on Rough Terrain with Posture Adaptation

Abrupt changes in elevation and rough terrain are some of the biggest challenges for wheeled robots. Legged robots offer the necessary versatility but pose additional challenges in terms of design and control. Our project tackles the problem of making a legged robot capable of traversing rough terrain with the ability to adapt its body posture to avoid obstacles and get through confined spaces. The project evaluates various approaches to locomotion in rough terrain within constraints. Our goal is to augment the university's T-Hex legged robot kit with necessary sensors to facilitate locomotion and perception algorithms. Through this project, we aim to cultivate an educational environment for robotics at Habib University and encourage students to make further progress within the domain.

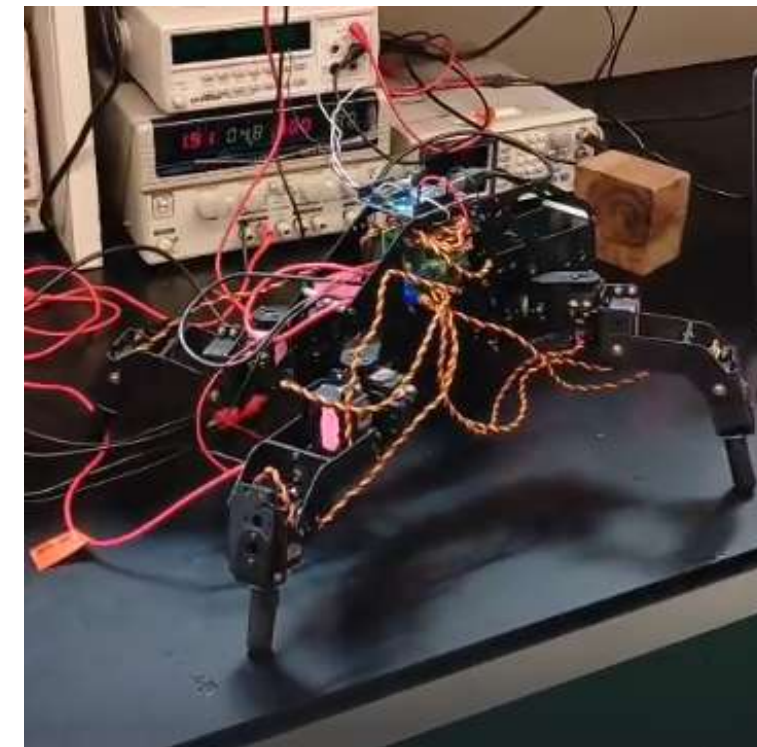
Publications, Creative Projects & Global Experiences

Publication – Poetry published in Arzu Anthology Vol.5

Exchange Program – Selected for UC Berkeley Learn Abroad Program

Exchange Program – Selected for Texas A&M Research Abroad Program with 50% scholarship

Competition – Participated in the International Collegiate Programming Contest (2023, 2024 & 2025)





KAYNAT ZEHRA

Ismat & Mustafa Kassam HU TOPS Scholar

BS Computer Engineering

✉ kaynatzehra24@gmail.com

☎ +923313990165  LinkedIn

"Automation, AI, and IoT excite me to build intelligent systems that solve real-world problems, and I intend to pursue a career at the intersection of technology, manufacturing, and product innovation."

Core Skills

- Arduino, Athena
- CAD Modelling (SolidEdge, SolidWorks, Fusion 360 and FEA Analysis)
- Cloud – AWS (DynamoDB, IoT Core, Lambda, Streamlit)
- C++, CNNs
- Embedded Systems & IoT (ESP32, MQTT, Sensor Integration)
- Javascript
- Machine Learning (PyTorch, Transfer Learning, Transformer Embeddings)
- Python

Core Competencies

Adaptability; Drive for Results; Planning; Takes Initiative

Leadership & Co-Curricular Activities

Team Lead

Deputy Director,
Gaming Club Habib Debate Union

Registrations Team Lead,
Young Leaders Club

Core Team Member,
Multiverse Club

Operations Team Member,
Serve Club

Employment Experience

Habib University X Dawlance,
Student Researcher – Team Lead
(June – August 2025)

Habib University,
Teaching Assistant – Algorithmic
Problem Solving
(August – December 2024)

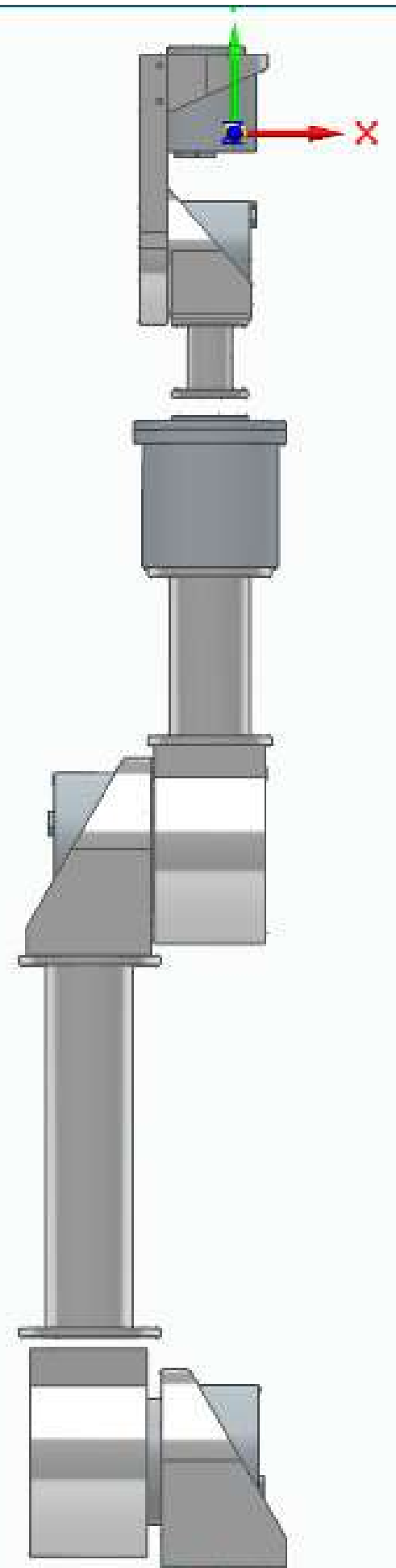
HBL,
Intern – SME Department
(July – September 2024)

Habib University,
Teaching Assistant – Electric Circuits
(September – December 2023)

Final Year Project

Design and Development of a 6 DOF Industrial Robotic Arm

Our Final Year Project addresses a real manufacturing problem at Dawlance and Toyota Pakistan, where repetitive precision tasks like sticker placement and sealer application are done manually, causing quality variance, worker fatigue, and rework costs. We designed a locally built 6-DOF reconfigurable robotic arm achieving millimeter-level positional precision at a fraction of the cost of imported alternatives like UR5e or FANUC systems. The arm features two interchangeable end-effectors (it is reconfigurable), frameless DC motors with harmonic gearboxes selected through weighted decision matrices, aluminum links validated through SolidWorks static analysis and FEA criteria, and inverse kinematics with minimum-jerk trajectory planning. The project directly targets Pakistan's manufacturing automation gap while building industrial-grade capability at accessible cost.





MIAN A. WASAY

BS Computer Engineering

✉ mawasay2003@gmail.com

☎ +923218202055  LinkedIn

"I am passionate about Artificial Intelligence and Cloud Computing as tools for solving complex problems, and I aspire to bridge hardware and software through ML models and IoT solutions."

Core Skills

- Cloud Computing
- Computer Vision
- Internet of Things (IoT)
- Machine Learning and Deep Learning
- Python Programming

Core Competencies

Acts with Ownership; Adaptability;
Collaborates Openly; Drive for Results;
Effective Presentation Skills; Problem Solving

Leadership & Co-Curricular Activities

Deputy Director Liaison

Computer Engineering Representative

Team Mentor

Orientation Leader

Food And Hygiene Cabinet Member,
Habib University Student Government

Employment Experience

Computer Science Teacher,
Ida Rieu School for Blind and Deaf
(June 2023 – August 2025)

Summer Tehqiq Research Program
Researcher,
Habib University
(June – August 2025)

Intern,
Dawlance
(July – August 2025)

Final Year Project

Aesthetic Faults Identification of Injection Molded Parts

In collaboration with Dawlance, this project addresses the inefficiencies of manual visual inspection in manufacturing. Manual processes often lead to inconsistent evaluations, resulting in significant cumulative losses from missed defects and potential damage to the company's reputation. To solve this, we developed a 3D inspection system that automates quality evaluations and identifies faults in 3D-manufactured parts before they leave the plant.

Publications, Creative Projects & Global Experiences

Publication – "Deployment-Oriented Memory-Based Visual Inspection of Injection-Molded Parts." Computer Vision Conference (CVC), Amsterdam, Netherlands, May 2026





MUBASHIR ANEES

Hilton Pharma HU TOPS Scholar
BS Computer Engineering

✉ soomromubi@gmail.com

☎ +923110345043 LinkedIn

"Driven by AI's role in modern industry and security, I aim to be an AI Engineer. I combine research experience with full-stack skills in React and Django to build impactful solutions."

Core Skills

- AWS
- C++
- CSS
- Docker
- Git
- HTML
- Javascript (React)
- Kubernetes
- Python

Core Competencies

Acts with Ownership; Adaptability; Planning;
Takes Initiative

Leadership & Co-Curricular Activities

General Secretary,
Moseequi & Raqs

Deputy Director General HUMUN
VIII, VII, VI
Gaming Club Habib Debate Union

Sindhi Lead,
Arts and Culture Club

Graduation Committee Member,
Habib University Student Government

Photography Team Member for HUCON,
Multiverse Club

Employment Experience

Undergraduate Researcher,
Habib University
(June – August 2025)

Undergraduate Researcher,
Habib University
(June – August 2024)

Final Year Project

Aesthetic Fault Detection of Injection Molded Parts

The Aesthetic Fault Detection (AFD) project is an automated quality control solution developed for Dawlance to inspect large injection-molded parts. It replaces subjective manual inspection, which causes over PKR 6 million in annual losses, with an objective, high-precision AI system. Core Technology Hardware: A custom Split-Axis mechanical system (turntable and rotating arm) captures 360-degree views of components up to 100x70x50 cm. Software: The PatchCore unsupervised deep learning algorithm identifies subtle surface defects (scratches, dents) by learning from "perfect" samples, bypassing the need for rare faulty data. Key Outcomes Efficiency: Delivers results within a 3-minute production cycle with up to 98% accuracy. Viability: Offers a 9-month ROI while advancing SDG 9 and 12 through waste reduction.

Publications, Creative Projects & Global Experiences

Research Paper – Research Paper on "Deployment-Oriented Memory-Based Visual Inspection of Injection-Molded Parts" Published in Springer CVC 2026





MUHAMMAD A. MEHDI

Hilton Pharma HU TOPS Scholar

BS Computer Engineering

✉ aqeel2468mehdi@gmail.com

☎ +923317927131  LinkedIn

"Computer Engineering student passionate about embedded systems and robotics, motivated to design intelligent hardware-software solutions and pursue a career building innovative, real-world automation and robotic technologies."

Core Skills

- C
- C++
- Matlab
- Microcontrollers
- Python

Employment Experience

Undergraduate
Researcher,
Habib University
(June – August 2025)

Final Year Project

Collaborative Human-Robot Gantry System for Product Packaging and Palletizing at Dawlance Assembly Plant

My Final Year Project focuses on designing a Collaborative Human-Robot Gantry System for product packaging and palletizing at Dawlance. Currently, workers manually lift microwaves weighing up to 40 kg and stack them onto pallets, which poses serious ergonomic risks. Using the NIOSH Revised Lifting Equation, the task was evaluated with a lifting index of 3.1, indicating a hazardous working condition. The proposed system introduces a human-robot collaborative gantry that automates heavy lifting and palletizing while allowing workers to perform dexterous tasks such as packaging preparation and quality checks. The aim is to reduce physical strain, improve workplace safety, and increase operational efficiency while aligning with Industry 5.0 principles that emphasize human-robot collaboration rather than full automation.



MUHAMMAD M. RAZA

Bank Al Baraka HU TOPS Scholar

BS Computer Engineering

✉ razamanqad@gmail.com

☎ +923427052288 in LinkedIn

*"I am Manqad, an AI and automation enthusiast.
Deep learning fascinates me, and I love to work
on computer vision-based projects."*

Core Skills

- Matlab
- Python
- Sql
- Tensorflow

Core Competencies

Acts with Ownership; Adaptability;
Collaborates Openly; Effective Presentation
Skills; Encourages Innovation; Problem Solving;
Takes Initiative

Employment Experience

Dawlance,
Computer Vision Engineer
(June 2025 – March 2026)

Final Year Project

Aesthetic Fault Identification System

In collaboration with Dawlance, this project addresses the inefficiencies of manual visual inspection in manufacturing. Manual processes often lead to inconsistent evaluations, resulting in significant cumulative losses from missed defects and potential damage to company reputation. To solve this, we have developed a 3D inspection system that automates quality evaluations and identifies faults in 3D-manufactured parts before they leave the plant.

Publications, Creative Projects & Global Experiences

Publication – "Deployment-Oriented Memory-Based Visual Inspection of Injection-Molded Parts." Computer Vision Conference (CVC), Amsterdam, Netherlands, May 2026





M. QUDDUSI KASHAF

Hilton Pharma HU TOPS Scholar

BS Computer Engineering

✉ kashafmuhammad18@gmail.com

☎ +923160274249  LinkedIn

"I am interested in Computer Vision and Data Science and am looking for roles accordingly."

Core Skills

- C++
- Databases – MySQL
- Databases – MongoDB
- MERN Stack
- Microsoft Office
- Python – PyTorch

Core Competencies

Adaptability; Collaborates Openly; Planning;
Takes Initiative

Academic Awards

Dean's List 2023, 2024, 2025

High Academic Leap Scholarship 2023

High Achievement Scholarship 2024

Leadership & Co-Curricular Activities

Graduation Committee Member

Treasurer,
Habib University Student Government

Emerge Students Mentor,
Young Leaders Club

Design Team,
Brain.hack() – CSEC (Computer Science
and Engineering Club)

Editor,
Pride Press

Employment Experience

Teaching Assistant – Calculus/Operating
Systems,
Habib University
(August – December 2025)

Computer Vision Intern,
Vectracom Pvt Ltd
(July – October 2025)

Data Science Intern,
10Pearls
(June – August 2025)

Final Year Project

FPGA-Accelerated Transformer for sEMG-Based Gesture Prediction

This project addresses the accessibility gap for advanced prosthetics in Pakistan by developing an affordable, EMG-based control system. The aim is to bridge the divide between rudimentary mechanical devices and high-cost imported myoelectric hands. By leveraging a lightweight, quantized Transformer model, the system tracks continuous hand motion from non-invasive surface EMG signals. To achieve real-time performance, the model is implemented on a low-cost FPGA, utilizing its inherent parallelism for high-speed, power-efficient processing. The purpose is to provide a "brain" for prosthetics that translates muscle activity into accurate joint angles for virtual or physical hands with low latency. This hardware-software co-design ensures high-accuracy gesture recognition on a portable edge device.

Publications, Creative Projects & Global Experiences

Research Paper – Submitted a paper on
Natural Language Processing

Conference Presentation – Attended
Summer PhD workshop at Chinese University
of Hong Kong





RAMEEN SIDDIQUI

Burque Corporation HU TOPS Scholar
BS Computer Engineering

✉ rameensiddiqui3@gmail.com

📞 +923358120561 🔗 LinkedIn

"Final-year Computer Engineering student at Habib University. Project work in robotics, embedded systems, and applied AI. Seeking roles in robotics engineering or automation, particularly in manufacturing and industrial technology."

Core Skills

- AWS IoT Pipeline, Arduino
- C/C++, CAD, CNNs
- CNC, Computer Vision &
- Applied AIESP32
- IoT & Cloud Communication
- JavaScript, JSON Data
- Modeling, Matlab
- MobileNetV2 Fine-Tuning
- MQTT/HTTPS, Programming
- Python

Core Competencies

Agility; Planning

Leadership & Co-Curricular Activities

Small Business Owner: Co-Founder Fuzzora, Launched And Managed A Product-Based Business Handling Procurement, Pricing, Budgeting, And Social Media Marketing.

Member,
Multiverse Club

Member,
Serve Club

Employment Experience

Teaching Assistant,
Habib University
(September – December 2025)

Undergraduate Researcher,
Dawlance and Takhleeq Office, Habib University
(June – August 2025)

Intern Sme Banking,
HBL
(July – August 2024)

Final Year Project

Design and Development of a 6 DOF Industrial Robotic Arm

This project designs and builds a low-cost 6 DOF industrial robotic arm at Habib University, developed specifically for two Pakistani manufacturers: Dawlance, where it places stickers on refrigerator doors, and Toyota Pakistan, where it applies FIPG sealer to engine components. Both tasks are currently done by hand, causing quality inconsistencies, worker fatigue, and chemical exposure. The broader purpose is to prove that affordable, locally manufactured automation is possible for Pakistani industry. This project closes that gap, delivering a precision robotic platform built from locally sourced aluminum, off-the-shelf motors, and in-house fabrication, designed around the actual workspace and budget constraints of Pakistani factories.

Publications, Creative Projects & Global Experiences

Creative Project – Co-founder of Fuzzora in which i launched and managed a product-based business

Hackathon – FinTech Hackathon: Runner-Up
Hackathon – Collaborated in a team to develop and present a financial technology solution competitively





SAIF NAZIR

Ismat & Mustafa Kassam HU TOPS Scholar

BS Computer Engineering

✉ saif.nazir2004@gmail.com

☎ +923443803402  LinkedIn

"I am experienced and interested in Embedded Systems, Robotics, and Graphics Programming, and I want to pursue a career path in Embedded AI and Robotics."

Core Skills

- C++
- Embedded Programming
- Matlab
- Python
- Verilog

Academic Awards

Dean's List 2023

High Academic Leap Scholarship 2024

Leadership & Co-Curricular Activities

President (Mindstorm Chapter) - CSEC

Volleyball Representative,
Sports & Recreational Club

Cultural Representative - GBC,
Arts and Culture Club

Employment Experience

Student Researcher,
Habib University
(June – August 2025)

Research Assistant,
Habib University x Engro Polymer
(June – August 2024)

Final Year Project

Transformers at the Edge: EMG-Based Hand Prosthetics

This project develops a hardware-accelerated system that tracks continuous hand motion from bio-signals generated during muscle activity. It leverages a lightweight and quantized Transformer model, which is pre-trained on non-invasive surface EMG data to learn human kinematics. The model is deployed onto a low-cost Xilinx Zedboard FPGA to tap its inherent parallelism and achieve the ultra-low latency required for real-time interaction via high-speed processing, and the output kinematics are streamed to Unity for 3D visualization. The purpose is to deliver a scalable edge-AI framework for advanced prosthetics using hardware-software co-design, bridging the gap between simulated biomechanics and real-world hardware deployment.

Publications, Creative Projects & Global Experiences

Research Paper – Research Paper on "Enhancing Campus Safety Education through Immersive Learning: A Constructivist Approach to VR Evacuation Training" accepted for iCoMET 2026 on March 2026





SAJAL FATIMA

Amin Tai Excellence Scholar

BS Computer Engineering

✉ sajalfatima2003@gmail.com

☎ +923355849831  LinkedIn

"Interested in computer science and entrepreneurship, with a focus on building innovative, technology-driven solutions and exploring opportunities at the intersection of business and software development"

Core Skills

- C++
- AI
- Graphic Designing
- Machine Learning
- Python

Core Competencies

Problem Solving; Strategic Thinking; Takes Initiative

Leadership & Co-Curricular Activities

President,
Entrepreneurship Club

Head Volunteer,
Gaming Club Habib Debate Union

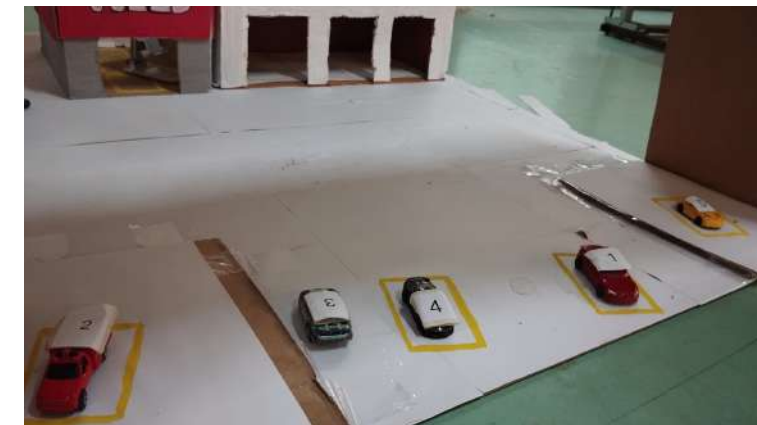
Employment Experience

Pakistan Agricultural Research,
Data Scientist
(June – August 2024)

Final Year Project

Vehicle Repair Management System with Indus Motor Company

Vehicle Repair Management System (VRMS) addresses inefficient manual tracking in Indus Motor Company's post-assembly repair facility, where inspections, handwritten statistics, and barcode logging limit real-time visibility. The system uses HD IP cameras, custom tags, edge-based computer vision, a PostgreSQL database, and a dashboard to detect bay occupancy, track vehicle aging, and generate overstay alerts with SAP-compatible integration. Current progress includes requirement analysis, workflow study, and a proof-of-concept direction targeting real-time occupancy and stuck-vehicle alerts. The project now follows two tracks: Track A focuses on IMC deployment, while Track B evolves VRMS into a scalable SaaS solution using license plate recognition.



Publications, Creative Projects & Global Experiences

Publication – A Graph-Enhanced Framework for Predictive Modeling on Bibliographic Data published at Complex Networks



SHAAF FAROOQUE

Hilton Pharma Merit Scholar
BS Computer Engineering

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☎ +923150207936  LinkedIn

"My goal is to design scalable embedded systems, motivated by RTOS and hardware-software integration. I create reliable real-time solutions that connect the dots between hardware and programming."

Core Skills

- AWS IoT
- C / C++
- Python
- Verilog
- Zephyr RTOS

Core Competencies

Adaptability; Agility; Collaborates Openly;
Drive for Results; Effective Presentation Skills;
Planning; Strategic Thinking; Takes Initiative

Leadership & Co-Curricular Activities

Vice President,
Gaming Club Habib Debate Union

Futsal Lead,
Sports & Recreational Club

Employment Experience

Machine Learning Intern,
Pakistan Agriculture Research
(June – August 2024)

Final Year Project

Repair Vehicle Management System with Indus Motor Company

This project is a vision-based vehicle detection and tracking system developed for Indus Motor Company, aimed at transforming manual logistics into a scalable SaaS solution. Leveraging YOLO for real-time detection and EasyOCR for automated license plate recognition, the system accurately monitors vehicle movement throughout the repair lifecycle. A key innovation is the integration of an LLM-driven API, allowing staff to interact with complex vehicle data using natural language queries. The system enhances operational efficiency, minimizes human error in inventory management, and provides actionable insights. Ultimately, it streamlines industrial workflows by providing a robust, automated framework for vehicle tracking and data management in large-scale automotive facilities.

Publications, Creative Projects & Global Experiences

Research Paper – Research Paper on A Graph-Enhanced Framework for Predictive Modeling on Bibliographic Data published in Complex Networks and their Applications XIV in May 2026





SHER ALI

CRESCENT STEEL HU TOPS Scholar
BS Computer Engineering

✉ sheralikhan9699@gmail.com

☎ +923360342267  LinkedIn

"I like to work at the intersection of Artificial Intelligence, software systems, and computer engineering, focusing on building reliable, research-driven solutions that scale from theory to practice."

Core Skills

- AI Development
- Computer Vision
- Product Development
- Robotics

Core Competencies

Acts with Ownership; Effective Presentation Skills; Planning; Takes Initiative

Leadership & Co-Curricular Activities

Executive Member – Treasurer,
Entrepreneurship Club

Event Cabinet Member,
Habib University Student Government

Outreach Member,
Serve Club

Cabinet Member,
Gaming Club Habib Debate Union

Lead – Robotics Competition,
IEEE (Institute of Electrical and Electronics Engineers)

Employment Experience

Software Engineer – AI (FYP Contract),
Dawlance Arcelik, Pakistan
(August 2025 – March 2026)

Summer Tech Researcher,
Habib University – Research Department
(May 2025 – July 2026)

AI Engineer Intern – Remote,
ASF Tech Partners (Pvt Ltd), Singapore
(June – August 2025)

Computer Vision Engineer Intern,
Agha Khan University Hospital
(July – August 2025)

Final Year Project

Collaborative Human-Robot Gantry System

The project aims to eliminate severe musculoskeletal risks at Dawlance by automating the heavy lifting of 40kg microwaves. By transitioning from manual labor to a Human-Robot Collaborative setup, we protect workers from injury while they handle dexterous tasks like quality checks. I am developing a 4-axis gantry robot integrated with a ROS2-based computer vision pipeline on a Jetson Orin Nano. This allows the system to autonomously localize and palletize units within a 3.5m x 3.5m footprint, compliant with ISO 15066 safety standards. The system reduces the NIOSH Lifting Index from a dangerous 3.1 to a safe 1.0, effectively preventing chronic worker injuries. It also minimizes product damage and provides a cost-effective, locally engineered automation solution.

Publications, Creative Projects & Global Experiences

Research Paper – Research paper on "Enhancing Campus Safety Education Through Immersive Learning: A Constructivist Approach to VR Evacuation Training."

Competition – Participant of "Invent for Planet" Hosted by Texas A&M University





SYED MUHAMMAD A. HAIDER

Ismat & Mustafa Kassam HU TOPS Scholar

BS Computer Engineering

 sh08467@st.habib.edu.pk

 +923363052219  LinkedIn

"I want to work in Project Management, Product Design, Architecture, or AI/ML"

Core Skills

- ML

Employment Experience

10 Pearls,
Data Scientist
(January – March 2026)

Final Year Project

ML-Assisted Optimization of a Four-Patch Probe-Fed Array Antenna

This project focuses on designing and optimizing a four-patch probe-fed array antenna for SUPARCO, alongside the development of a reverse machine learning model to support the optimization process. The project aims to reduce the computational cost and time associated with antenna simulations by using the ML model to predict optimal design parameters more efficiently.





S. ZAKI HUSSAIN RIZVI

Ismat & Mustafa Kassam HU TOPS Scholar

BS Computer Engineering
Computer Science

✉ szakihussain123@gmail.com

☎ +923346008144  LinkedIn

"Interested in programming, cybersecurity, IoT, and secure systems. Passionate about wireless networks, antennas, and building websites and apps. Aiming to pursue a master's and develop secure, scalable technologies."

Core Skills

- Antenna Design with Ansys Electronics Desktop
- C++
- CSS
- HTML
- Python

Core Competencies

Adaptability; Planning; Takes Initiative

Leadership & Co-Curricular Activities

Logistics Member,
Natural Science Club

Security Member,
Multiverse Club

Employment Experience

Pakistan International Airlines,
Network and Hardware Intern
(June – July 2024)

Final Year Project

Lightweight Cryptographic VPN Framework for Secure IoT Communication

This project focuses on designing and implementing a modular, lightweight cryptographic framework for secure communication in resource-constrained IoT devices. It aims to evaluate and compare efficient encryption algorithms such as ASCON, TinyAES, and SPECK, with an emphasis on performance, energy consumption, and security. The system is implemented on ESP32-based devices and integrates with cloud platforms like AWS for real-time data transmission and control. Through benchmarking metrics such as latency, CPU usage, and memory footprint, the project identifies optimal configurations for practical deployment. The outcome contributes to building scalable, low-overhead, and secure IoT systems, addressing real-world challenges in device-level security and communication efficiency.





SYEDA EMAAN

BS Computer Engineering

✉ syedaemaan2004@gmail.com

☎ +923332233326  LinkedIn

"Computer Engineering student specializing in R&D and Product Development. I connect code and hardware through robotics and IoT, transforming engineering concepts into functioning physical products."

Core Skills

- 3D CAD Software Fusion 360
- C/C++
- Cloud Computing
- Python
- ROS (Robotic Operating System)
- SolidWorks

Core Competencies

Agility; Strategic Thinking

Leadership & Co-Curricular Activities

Student Life – Registrations Volunteer

Director Of Marketing,
Habib Debate Union – HUMUN VI

Team Lead (Marketing),
Young Leaders Club – Emerge'23

Pinktober Volunteer,
Serve Club

Events Volunteer,
Math Club

Employment Experience

Dawlance (Summer Internship Takhleeq Program),
Undergraduate Researcher
(June – August 2025)

Final Year Project

Design and Development of a 6 DOF Robotic Arm

The project aims to design, model, and prototype a 6-Degree-of-Freedom (6-DOF) robotic arm capable of performing complex industrial tasks. In collaboration with industrial partners like Toyota and Dawlance, the goal is to create a system that bridges the gap between high-level software control and precise mechanical actuation. Since Pakistan is a third-world country, importing an industrial arm adds to the total cost because of the import tax, making it extremely expensive. Our aim is to create it locally so that it's cost-effective, and this also supports the idea of indigenous technology in Pakistan. The project focuses on implementing Kinematic Modeling and Motion Planning to ensure the arm can navigate with high precision.





UMAR HABIB

Hilton Pharma HU TOPS Scholar
BS Computer Engineering

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☎ +923142004895  LinkedIn

"A Computer Engineering graduate focused on Machine Learning and LLMs. Coursework in NLP, LLMs, Artificial/Computational Intelligence, with certification in Generative AI, drives my pursuit of a career in AI/ML engineering."

Core Skills

- C++
- MATLAB
- Mediapipe
- MS SQL
- NumPy
- Pandas
- Python
- PyTorch

Core Competencies

Problem Solving; Takes Initiative

Leadership & Co-Curricular Activities

Deputy Director Public Relations – HUMUN VII

Panel Representative – Computer Engineering

Organizer – Mega Basketball Tournament,
Sports & Recreational Club

Employment Experience

Teaching Assistant,
Habib University
(August 2025 – December 2025)

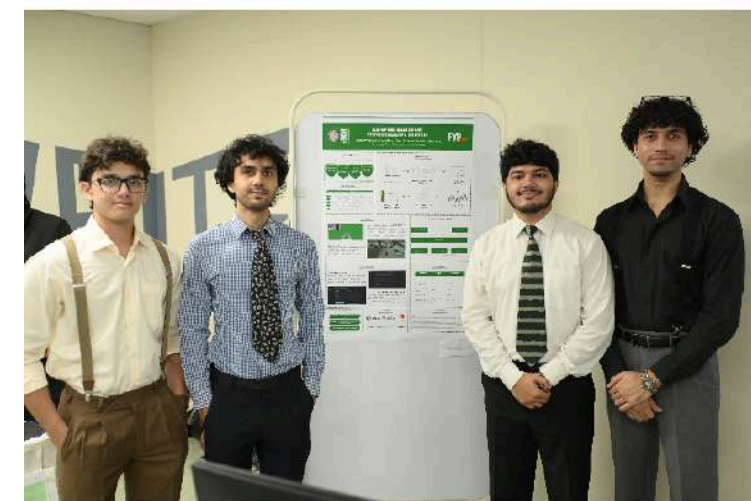
Research Assistant,
University
(June – August 2024)

.Net Intern,
Dow University of Health Sciences
(June – August 2023)

Final Year Project

A Gamified and Assistive Physiotherapy System

My final year project focuses on gamified physiotherapy, designed to make rehabilitation exercises more engaging, accurate, and effective. The system integrates physiotherapy routines into an interactive game environment, allowing patients to perform exercises with reduced therapist supervision while ensuring correct movements. The primary aims are to improve exercise accuracy, track patient progress over time, and provide actionable insights for therapists, supporting better-informed treatment decisions. By combining real-time feedback, performance tracking, and gamification, the project benefits both patients and therapists. It motivates adherence, enhances recovery outcomes, and provides clinicians with valuable data to optimize therapy plans and monitor long-term progress.



BS

COMPUTER SCIENCE



ABDUL RAFAY

BS Computer Science

 abdulrafay23190@gmail.com

 +923293072589  LinkedIn

"Interested in solving real-world problems in fast-paced, collaborative environments, contributing to product development through AI and web technologies."

Core Skills

- Nextjs
- Python
- SQL
- Supabase
- Typescript

Academic Awards

Dean's List 2023, 2024

Employment Experience

Freelance,
Fullstack Developer (Contract)
(December 2025 – March 2026)

Pseudomastery,
CEO & Fullstack Developer
(January – October 2025)

Habib University,
Research Assistant
(May – August 2025)

K-Electric,
Chatbot Developer
(June – July 2024)

Final Year Project

Realtime Stock Detection for FMCG in Supermarkets

This project aims to automate low-stock detection and streamline shelf replenishment in supermarkets, ensuring FMCG products remain consistently available and reducing lost sales due to poor display or stockouts. The system leverages real-time CCTV monitoring and computer vision models to assess product orientation against defined criteria and trigger alerts when stock levels fall below a set threshold.





ADINA A. MANSOOR

BS Computer Science

✉ adinaadnanmansoor@gmail.com

☎ +923229255992  LinkedIn

"I'm interested in Software Engineering, AI, and Education. I've built websites and am developing an AI translation model. I also enjoy teaching and hope to combine technology with learning."

Core Skills

- Backend Development
- JavaScript
- Machine Learning
- Python
- SQL/Database Management

Core Competencies

Adaptability

Academic Awards

High Academic Leap Scholarship 2025

Employment Experience

Tutor,
Self Employed
(August 2023 – March 2026)

Volunteer Web Developer,
Hamdard Haath
(June 2025 – March 2026)

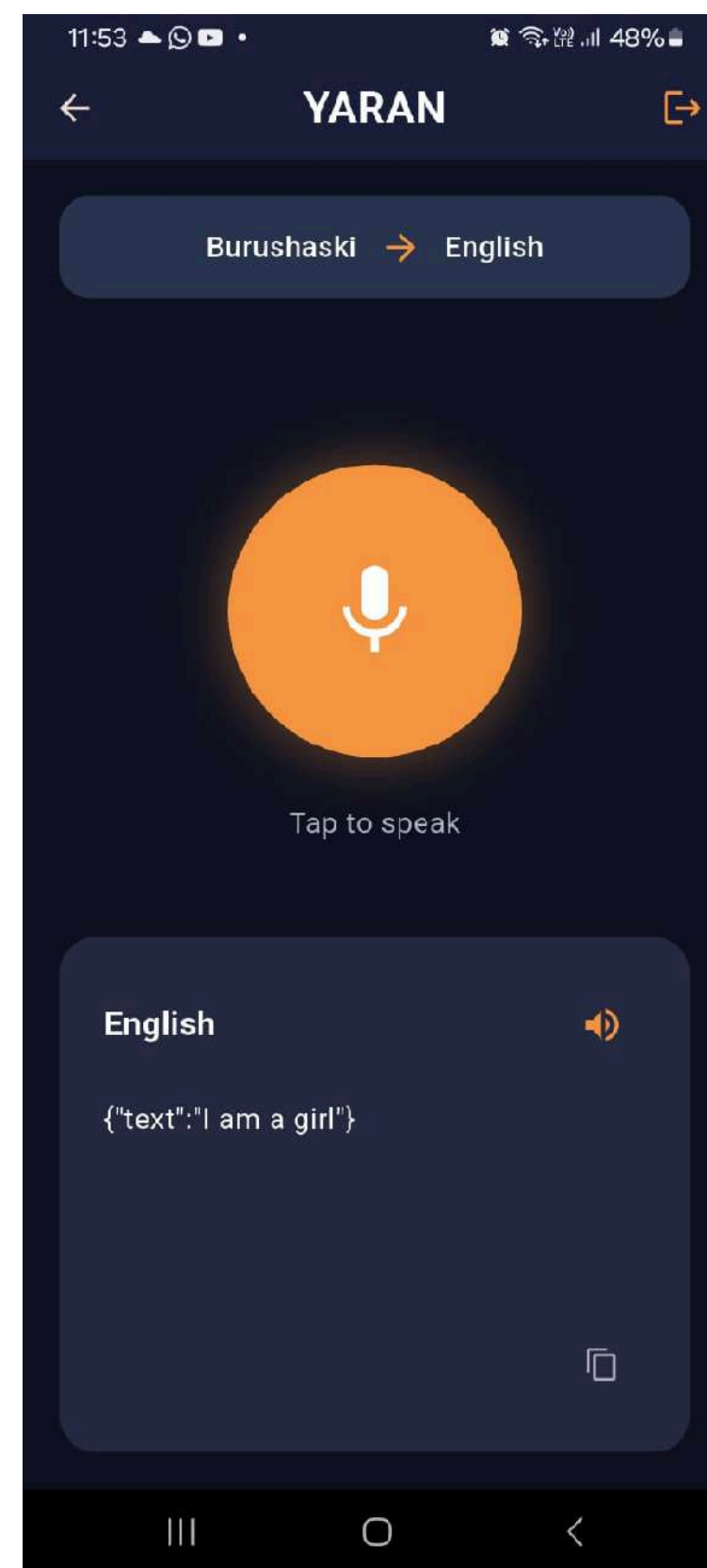
Final Year Project

YAARAN

My project focuses on developing an AI-based speech translation model that converts Burushaski audio into English text. Burushaski is primarily a spoken language with very limited written resources and no publicly available digital datasets and is increasingly at risk as younger generations shift toward Urdu and English. The project aims to support language preservation while improving accessibility through AI technologies. Since no dataset currently exists, our team is collecting, curating, and annotating original audio data through multiple community-based data collection methodologies. The curated dataset will be used to train and evaluate the translation model. Beyond Burushaski, YAARAN also aims to establish a framework that could enable the development of AI translation systems for other low-resource spoken languages in the future.

Publications, Creative Projects & Global Experiences

Research Paper – Paper titled: Development of Burushaski Speech – English Text Translation Dataset – Currently under review





AFIFAH UZAIR

BS Computer Science

 afifahuzair@live.com

 +923212060708  LinkedIn

"Computer Science student passionate about web development and AI, focused on building user-centric applications and intelligent solutions. Eager to grow, learn emerging technologies, and contribute to impactful, innovative projects."

Core Skills

- C++
- Flutter
- Microsoft Excel
- Node
- Python
- React

Core Competencies

Planning

Academic Awards

High Achievement Scholarship 2022, 2023, 2024, 2025, 2026

Leadership & Co-Curricular Activities

HUCON Registrations Team Member
Sustainability Club,
Design Team Member

Final Year Project

Ethnoverse

This project addresses the absence of a centralized, searchable, multimedia archive that documents tribal communities in ways that are accessible to researchers, educators, and the public. Our motivation is both technical (to build a robust, extensible system demonstrating MERN stack and 3D reconstruction techniques using 3D Gaussian splatting) and social (to make community knowledge discoverable and ethically represented).





AHMED KHALID

BS Computer Science

 ahmedkhalid12009@gmail.com

 +923033552357  LinkedIn

"Motivated by logic-driven problem solving, I aim to combine cybersecurity and artificial intelligence to tackle complex challenges and continuously push my limits."

Core Skills

- C++
- Python
- React
- SQL
- Tensorflow

Core Competencies

Acts with Ownership; Agility; Collaborates Openly; Drive for Results; Planning; Strategic Thinking; Takes Initiative

Leadership & Co-Curricular Activities

Member,
Gaming Club Habib Debate Union

Member,
Feminist Collective

Employment Experience

Intern,
Microvision
(July – August 2025)

Frontend Developer,
Defence Residents Social Welfare
Association
(May – July 2025)

Full-Stack Intern,
Jobture
(June – August 2021)

Final Year Project

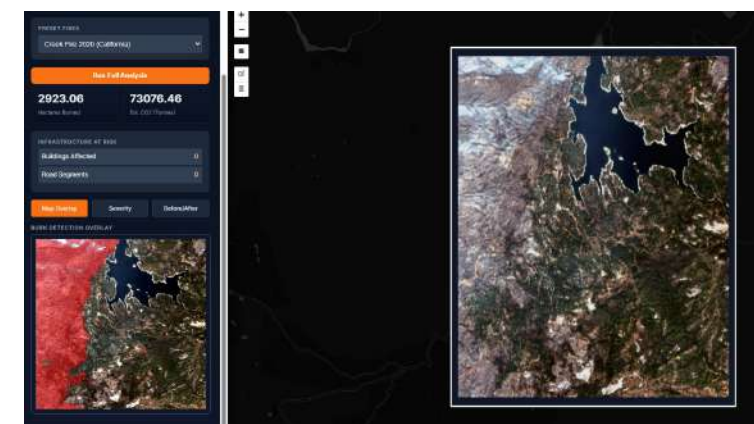
We have created an active Wildfire Monitoring system, where we analyze satellite imagery from SentinelHub over a specific user-entered date range, to then provide analysis of active wildfires and damages from wildfires. We have trained two models, one for detecting burn scars and the other for predicting wildfire spread. The first model is focused on providing an analysis of the scar the wildfire left and the severity of the burn. The second model is used to run predictions as to how the wildfire will spread while the wildfire itself is still active. Combined, our Final Year Project aims to provide a unified approach to allow farmers, companies, and individuals alike to be safe from the damages of wildfires.

Publications, Creative Projects & Global Experiences

Competition – Took part in the Harvard WorldMUN debate competition

Hackathon – Was shortlisted for the Faysal Bank Hackathon

Creative Project – Worked in tandem with Faysal Bank to produce a solution for IT exporters to obtain earnings from work abroad





AHSAN SIDDIQUI

BS Computer Science

✉ ahsan.sidd2003@gmail.com

☎ +923178417095 🔗 LinkedIn

"Interested in Machine Learning, AI, and Computer Vision. I aim to begin my career as an Associate ML Engineer/MLOps and plan to pursue a Master's specializing in Computer Vision."

Core Skills

- Deep Learning
- LLMs
- Machine Learning
- Python
- Vision Transformers

Core Competencies

Adaptability; Agility; Strategic Thinking

Leadership & Co-Curricular Activities

Volleyball Lead,
Sports & Recreational Club

Security Team Lead and Volunteer,
Multiverse Club

Volleyball Team Captain,
Sports & Recreational Club

Table Tennis Lead,
Sports & Recreational Club

Employment Experience

Habib University,
Researcher – Summer Tehqiq Research Program
(June – August 2025)

Final Year Project

Predictive Fault Management in Power Distribution Networks

This research addresses the energy security challenges of Karachi, a metropolis of 20 million, by transitioning utility operations from a reactive to a proactive model. Utilizing three years of K-Electric historical data, live sensor readings, and localized variables like weather and traffic, the project develops a context-aware predictive system. The primary aim is to accurately identify fault locations, classify failure types, and estimate "Time to Repair" (TTR). By integrating "Just-in-Time" maintenance and risk mapping, the system reduces operational costs, minimizing the 70 PKR cost per manual complaint, and enhances customer trust through transparent communication. Validated against actual Outage Management System (OMS) data, this model leverages unutilized logs to create a robust, localized solution for Karachi's unique socio-economic and climatic landscape.

Publications, Creative Projects & Global Experiences

Research Paper – Research Paper on Automating ROP Diagnosis and Severity with Deep Learning published in IEEE(HONET) in December 2025

Research Paper – Participation in SemEval-2026 Task 5: Rating Plausibility of Word Senses in Ambiguous Sentences through Narrative Understanding – Manuscript ready and sent for Acceptance

Research Paper – Participation in CLEF 2026 Touche LAB – Currently in progress





AHTISHAM UDDIN

Towfiq Chinoy & Family HU TOPS Scholar

BS Computer Science

 ahtixamu@gmail.com

 +923142335543  LinkedIn

"Computer Science student focused on integrating AI into daily applications. With software engineering experience, I aim to build, scale, and manage intelligent systems on the cloud for real-world impact."

Core Skills

- LangChain
- NodeJS
- Python
- React
- TensorFlow

Core Competencies

Adaptability; Collaborates Openly; Planning; Takes Initiative

Leadership & Co-Curricular Activities

Habib Orchestra Performance – Tabla Player

Freshman Council – Public Relations, Habib University Student Government

Volunteer – HUCON, Multiverse Club

Team Lead Volleyball, Sports & Recreational Club

Employment Experience

Software Engineer, EmergiTech Solutions
(October 2025 – March 2026)

IT Intern, PayFast
(July – August 2025)

Data Science Intern, 10Pearls
(June – July 2025)

Final Year Project

SehatGuru: An AI-based Nutrition Tracking App for Pakistani Dietary Habits

SehatGuru is an AI-powered mobile application designed to bridge the gap between global health technology and Pakistani dietary habits. The project aims to provide culturally relevant nutrition and fitness guidance through an integrated AI ecosystem that can automatically identify regional dishes and provide personalized health advice. By addressing the high prevalence of lifestyle-related diseases in the country, the app simplifies health tracking for local cuisines that are often overlooked by global platforms. The primary impact lies in its ability to offer high-accuracy, context-aware insights, making sustainable fitness more accessible and effective for the Pakistani demographic through localized, data-driven support.

Publications, Creative Projects & Global Experiences

Publication – Participated in TalentCLEF Lab at CLEF 2025 with a published paper on multilingual talent intelligence and information retrieval.





AIMAN RIZWAN

BS Computer Science

 aimanrizwan77@gmail.com

 +923332264141  LinkedIn

"My interests and strengths lie in data analysis and backend development using Python, as most of my university projects have revolved around these skills."

Core Skills

- C++/OOP
- NetLogo
- PostgreSQL
- Python
- PyQt
- SQL

Leadership & Co-Curricular Activities

Social Media Marketing Manager,
Dream Stage

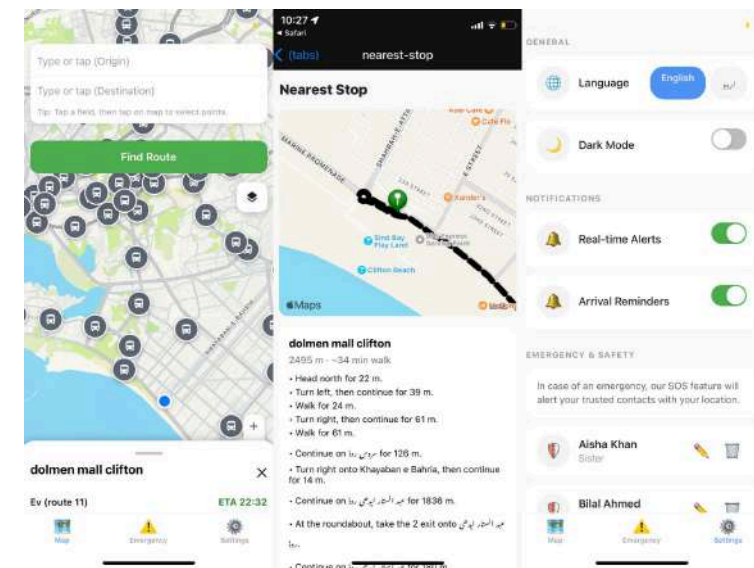
Employment Experience

Behbud Association,
Internship
(June – August 2025)

Final Year Project

BRT Bus App

This final year project is a user-centered mobile application developed with React Native, Python, and PostgreSQL to streamline the commuting experience for Karachi's BRT users. Designed with Human-Computer Interaction (HCI) principles, the app prioritizes accessibility for low-literacy users through a multilingual, icon-based interface and voice-assisted navigation. The core functionality utilizes a multi-directional graph and a modified Dijkstra's algorithm to compute optimized routes based on user preferences: shortest distance, fastest time, least transfers, or cheapest fare. Key features include real-time bus tracking within a 5 km radius, accurate ETA predictions, and "first-and-last-mile" walking directions. By integrating real-world fare estimation and a scalable backend, the system ensures reliable, inclusive urban transit navigation.





AINA SHAKEEL

Hilton Pharma HU TOPS Scholar

BS Computer Science

 aina.shakeel2017@gmail.com

 +923208352975  LinkedIn

"Data science and machine learning enthusiast interested in building intelligent systems from real-world data. I aim to work on AI-driven solutions that improve decision-making, automation, and scalable technology applications."

Core Skills

- Data Analysis (Pandas, NumPy)
- Machine Learning (Scikit-Learn, PyTorch, TensorFlow)
- Python
- Research Methods
- SQL

Core Competencies

Adaptability; Collaborates Openly; Planning; Takes Initiative

Leadership & Co-Curricular Activities

Speridian AI Hackathon – 2nd Runner Up

Vice President,
Sports & Recreational Club

General Secretary,
Sports & Recreational Club

Habib University Sports Olympiad
Organizer – Vice President,
Sports & Recreational Club

Participant Basketball, Rowing,
Powerlifting Competitions,
Sports & Recreational Club

Employment Experience

Project Intern,
Gerry's DNATA
(February – May 2026)

Lead Instructor,
Code School
(August 2025 – May 2026)

Undergraduate Researcher,
Habib University
(May – July 2025)

Teaching Assistant – Database Systems,
Linear Algebra and Object-Oriented
Programming,
Habib University
(August 2024 – December 2025)

Final Year Project

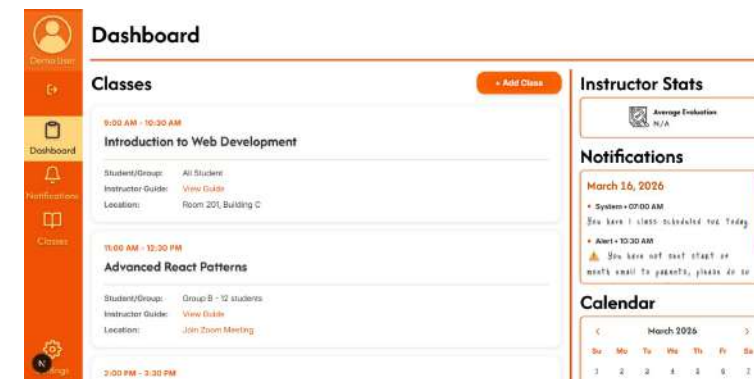
TeachWise: Automated Teaching Evaluation and Classroom Management

This project develops an AI-powered system to automate classroom evaluation and academic management. The system analyzes lecture recordings by extracting prosodic audio features such as pitch variation, loudness, and speech rate, and uses machine learning models to assess teaching quality indicators including energy, patience, student attention, and lesson pace. In parallel, a retrieval-augmented generation (RAG) approach compares lecture transcripts with lesson plans to evaluate curriculum adherence. The platform also integrates scheduling automation and a content management system (CMS) for managing classes, recordings, and evaluation reports. By combining acoustic analysis and semantic evaluation, the system generates objective teaching assessments and structured feedback, enabling scalable and consistent evaluation of instructional quality.

Publications, Creative Projects & Global Experiences

Publication – Classifying Pakistan's Diverse Languages Through Speech Using Deep Neural Networks

Conference Presentation – Published in the 2025 International Conference on Communication, Computing and Digital Systems (C-CODE), Islamabad





AIZA IMRAN

Sohail Tabba HU TOPS Scholar
BS Computer Science

 aizamran2003@gmail.com

 +923363831056  LinkedIn

"Motivated by Data, AI, and Management, aiming to build a career in analytical and strategic roles where I can solve real-world problems and grow my decision-making and leadership skills."

Core Skills

- Deep Learning
- Power BI
- Power Automate
- Python
- Software Development Processes and Methodologies

Leadership & Co-Curricular Activities

Women Techmakers - Global Ambassador

GDG - Core Team Member

Career Services Office - Event Volunteer

General Secretary,
Natural Science Club

Employment Experience

Data Analyst Intern,
UBL
(July - August 2025)

Undergrad Researcher,
Habib University
(March - December 2024)

Tech Intern,
Print Eazy
(March - May 2024)

Game Programmer,
Mindstorm Studios
(June 2023 - August 2024)

Final Year Project

AgriVerse: AI-Based Agricultural Commodity Price Prediction Platform

Developed an AI-powered platform to predict agricultural commodity prices using machine learning techniques, including LSTMs and ensemble models. The system integrates real-time data pipelines with a full-stack architecture, enabling continuous data ingestion, processing, and prediction. A multilingual dashboard was designed to ensure accessibility for diverse, non-technical users. The project aimed to address price volatility in agricultural markets by providing reliable, data-driven forecasts to support better decision-making for stakeholders. Key outcomes included improved prediction accuracy across multiple commodities and the successful deployment of an end-to-end system capable of handling real-world data. The project demonstrates the practical application of AI in solving domain-specific challenges at scale while prioritizing usability and impact.

Publications, Creative Projects & Global Experiences

Publication - A Qualitative Study of Bibliographic Data Sources and Retrieval Mechanisms for Computational Research

Publication - Published in 2024, 26th International Multi-Topic Conference (INMIC)

Leadership Role - Global Ambassador for WomenTechmakers - 2024





ALI A. RAJANI

Hilton Pharma Excellence Scholar

BS Computer Science

✉ ahr.rajani@gmail.com

☎ +923037328702 in LinkedIn

"Computer Science undergraduate and Trainee Product Manager at Folio3, passionate about Fintech and AI, applying design thinking, problem-solving, stakeholder management, leadership, and cross-team collaboration to build scalable, user-focused products."

Core Skills

- Data Analysis
- Dashboarding
- Figma
- Mern Stack
- Python
- Vibe Coding

Leadership & Co-Curricular Activities

Deputy Director Liaison,
Gaming Club Habib Debate Union

Club Representative,
Gaming Club Habib Debate Union

Events Cabinet,
Habib University Student Government

Associate Operations Lead,
Serve Club

General Secretary,
Brain.hack() - CSEC (Computer Science
and Engineering Club)

Employment Experience

AI Intern,
Nawadiraat
(June 2025 – August 2026)

Trainee Product Manager,
Folio3
(November 2025 – May 2026)

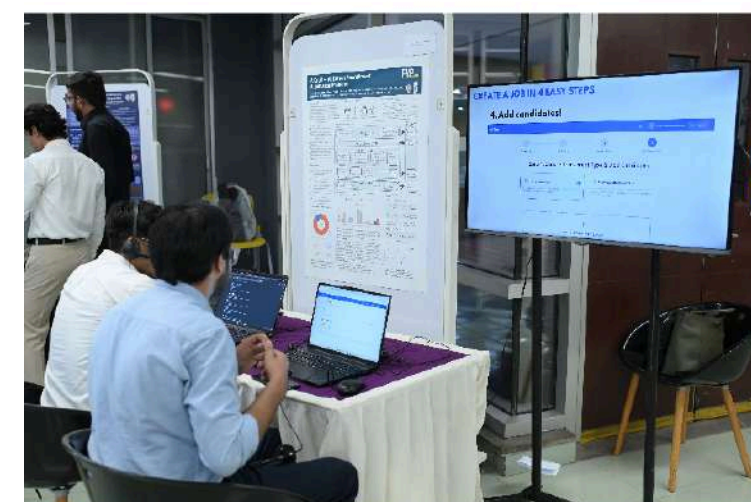
Final Year Project

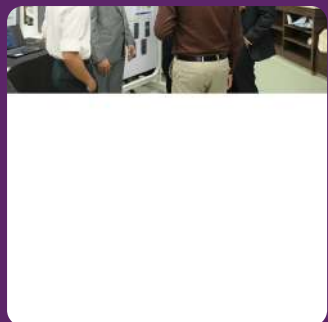
AI Recruit

Alcruit is an AI-powered recruitment platform designed to automate and improve the hiring process through the efficient and unbiased use of artificial intelligence. The system analyzes candidate resumes against job descriptions to identify relevant skills, experience, and role alignment, and then scores and ranks applicants accordingly. Shortlisted candidates are further evaluated through an AI-driven interview agent that conducts preliminary interviews and generates structured insights for recruiters. The aim of the project is to reduce manual screening time, improve candidate evaluation consistency, and support more data-driven hiring decisions. By integrating resume screening, candidate scoring, and automated interviews into a single workflow, Alcruit helps organizations streamline recruitment, minimize human bias, and enable recruiters to focus on higher-value decision-making.

Publications, Creative Projects & Global Experiences

Award – Global Innovate Hackathon Winner





ALI RAZA

BS Computer Science
Religious Studies

✉ alirazaaijaz0@gmail.com

☎ +923327951497  LinkedIn

"I am a Computer Science student with hands-on experience in Computer Vision, Machine Learning, and Geospatial Systems. I am passionate about building intelligent, real-world solutions."

Core Skills

- Bash
- C++
- Python
- SQL

Leadership & Co-Curricular Activities

Event Lead,
Gaming Club Habib Debate Union

Senior Editor,
Pride Press

General Secretary,
Pride Press

Sports Representative,
Sports & Recreational Club

Final Year Project

Drone Image Stitching

In this project, we developed a cost-effective alternative to satellite imaging by stitching high-resolution drone images into ultra-large panoramas. Using 150–200 images per scene at 4K–8K resolution, the pipeline applies classical feature detection algorithms (SIFT, SURF, ORB) alongside modern deep learning matchers (SuperGlue, LoFTR) to align and blend images seamlessly. Feature matching via BF Matcher and FLANN, combined with RANSAC-based homography estimation, ensures geometric accuracy, while multiband and feathering techniques produce smooth final outputs. The project benchmarks classical vs. deep learning approaches on accuracy and computational cost, offering insights into scalable, affordable aerial imaging solutions applicable to agriculture, urban planning, disaster response, and environmental monitoring.





AMNAH QURESHI

BS Computer Science

 amnahhqureshi@gmail.com

 +923159002345  LinkedIn

"The areas that excite me the most are artificial intelligence, and I intend to work in this field as well."

Core Skills

- Automation
- Pythonreact

Core Competencies

Collaborates Openly; Drive for Results;
Effective Presentation Skills; Encourages
Innovation; Planning; Problem Solving; Takes
Initiative

Leadership & Co-Curricular Activities

Serve Club,
Marketing Team

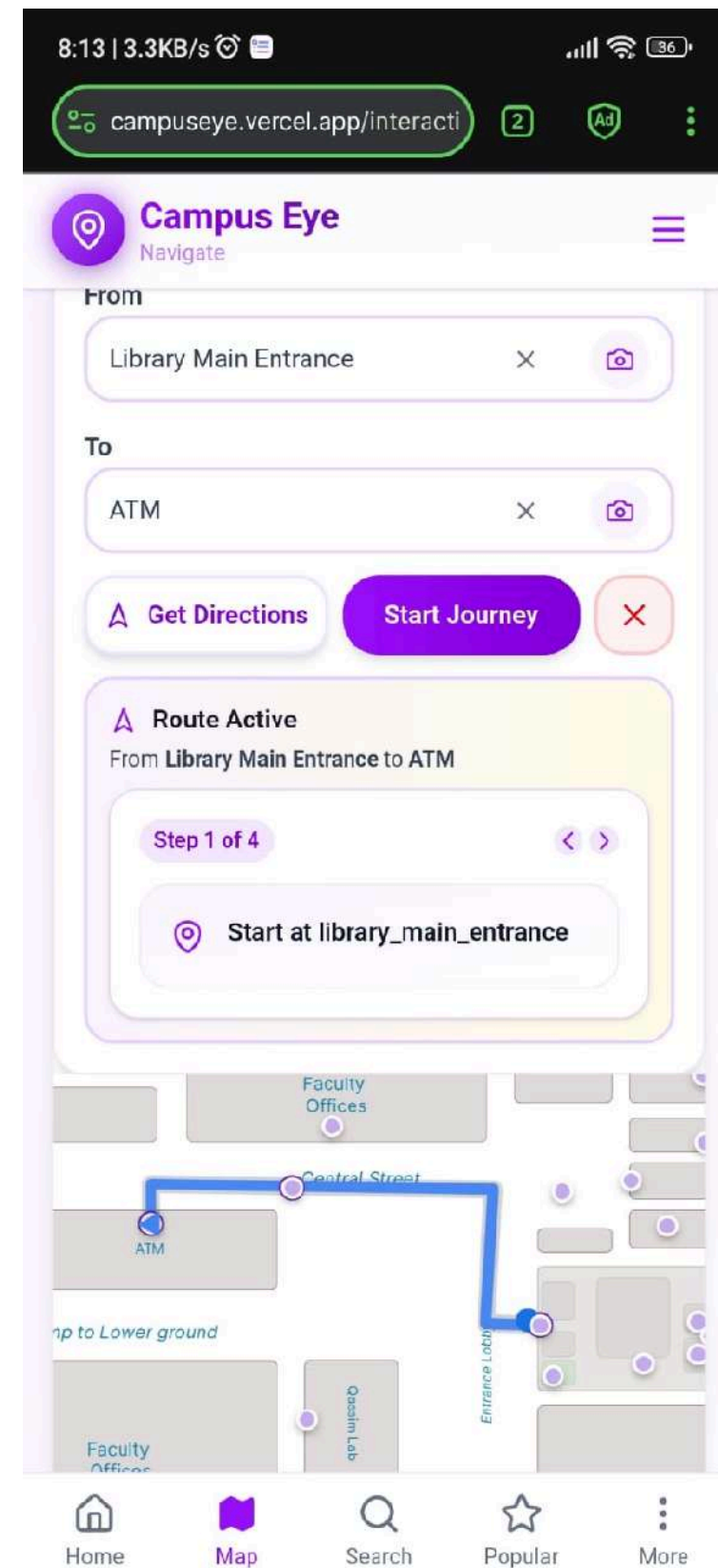
Employment Experience

Misl,
Lead Software Developer
(June 2025 – March 2026)

Final Year Project

CampusEye

The project is an indoor navigation app for Habib University. It shows optimal routes from the user's current location to the destination. Key features include user localization through Wi-Fi dead reckoning, an image processing module to recognize the user's current location through image input, and multi-floor routing.





AQUIB A. ANSARI

Recipient of Nargis & Shahid Soorty Grant

BS Computer Science

✉ aquibahmed2000@gmail.com

☎ +923162595214  LinkedIn

"I'm interested in building real, scalable tech products. I'm especially motivated by areas like Software Engineering, Data Engineering, and AI, where I can solve practical problems and create impactful systems."

Core Skills

- Backend Development
- Data Engineering
- Deep Learning
- ML
- SQL

Employment Experience

AI Engineer,
Biggorillaapps
(February – August 2026)

ML Intern,
Bewhoop
(June – August 2025)

Final Year Project

VetConnect

VetConnect is a web platform connecting pet owners with veterinarians, enabling online consultations, appointment booking, and pet health management to improve accessibility, convenience, and overall animal care.





ARSAL JANGDA

BS Computer Science

✉ arsaljangda2015@gmail.com

☎ +923347369968  LinkedIn

"Computer Science student focused on building scalable software and AI solutions, aiming to start as a Software Engineer specializing in backend systems and applied machine learning."

Core Skills

- C# and .Net (Backend Development)
- JavaScript (React, Node.js)
- Machine Learning (PyTorch, TensorFlow, Computer Vision)
- Python
- SQL and Database Management (PostgreSQL, MongoDB)

Core Competencies

Drive for Results

Leadership & Co-Curricular Activities

Cabinet Member,
Habib University Student Government

Employment Experience

Safarsystems,
Freelancing
(December 2025 – January 2026)

Hamara Mustaqbil,
Volunteer
(November 2025 – March 2026)

Aga Khan University,
Platform Operations Intern
(June – August 2025)

Final Year Project

SehatGuru: AI-Based Nutrition and Fitness Mobile Application

SehatGuru is a cross-platform mobile application that uses artificial intelligence to enable culturally relevant nutrition tracking for Pakistani users. The system integrates a ConvNeXt-based deep learning model for image-based food classification of local dishes and a FastAPI backend for processing and serving nutritional data. It calculates personalized calorie and macronutrient targets using the Mifflin-St Jeor equation and user-specific inputs. The application also includes a Retrieval-Augmented Generation (RAG) chatbot built with LangGraph and Google Gemini, which provides dietary guidance grounded in Pakistani Dietary Guidelines. By combining computer vision, backend APIs, and intelligent systems, the project delivers an accurate, scalable, and context-aware health solution.





ASHBAH FAISAL

BS Computer Science

✉ ashbahfaisal@gmail.com

☎ +923248205500  LinkedIn

"I am a Computer Science student at Habib University interested in Artificial Intelligence, Data Science, and QA, focused on building systems that analyze data and solve real-world problems."

Core Skills

- Automated Testing (Selenium Webdriver)
- C++
- Data Analysis (Pandas/Visualization)
- Python
- Sql

Core Competencies

Acts with Ownership; Adaptability; Agility;
Collaborates Openly; Effective Presentation
Skills; Encourages Innovation; Problem Solving;
Takes Initiative

Employment Experience

JS Bank,
Data Science Intern
(January – February 2026)

Final Year Project

Virtual Eye

Virtual Eye is an AI-based accessibility application designed to assist visually impaired individuals in navigating everyday environments. The system uses computer vision and deep learning to detect objects, clothing items, currency notes, and familiar faces in real time through a mobile camera. By analyzing visual data, the application provides information about the user's surroundings, helping them identify important objects and people. The project focuses on developing a reliable and efficient vision system that can operate in real-world conditions. Virtual Eye demonstrates how artificial intelligence and computer vision can be used to build assistive technologies that improve independence and accessibility for visually impaired users.





AYAAN AHMED

Recipient of Hilton Pharma Grant

BS Computer Science

✉ ayaancodes19@gmail.com

☎ +923442250069  LinkedIn

"Working in 3D website development and AI automation really is something that excites me. I intend to take a path that allows me to reach creativity in both these fields."

Core Skills

- C++
- Python
- React.js
- Three.js
- Unity

Core Competencies

Agility; Planning; Strategic Thinking; Takes Initiative

Leadership & Co-Curricular Activities

Gaming Club Habib Debate Union,
Marketing Team

Employment Experience

DoubleSpeed,
Content Curator
(December 2025 – January 2026)

Final Year Project

Adaptive Boss AI

We identified that players often lose interest in games once bosses become too easy after learning the required skill sets. To address this, we proposed a boss that adapts to the player's behavior and continuously changes its play style. Instead of the player learning the boss, the boss learns the player, creating an ongoing adaptive cycle. If successful, this AI-driven adaptability could extend beyond gaming into real-world scenarios such as negotiations.





AYESHA EIMAN

BS Computer Science

BioScience

 ayesha.eima.r@gmail.com

 +923080011893  LinkedIn

"I am interested in Generative AI and Software Testing, aiming to build reliable intelligent systems. I want a career in AI-driven software development and testing, using programming and QA skills."

Core Skills

- C/C++ Programming
- Python
- Qt Designer
- SQL Server
- Verilog

Core Competencies

Agility; Collaborates Openly; Drive for Results;
Strategic Thinking; Takes Initiative

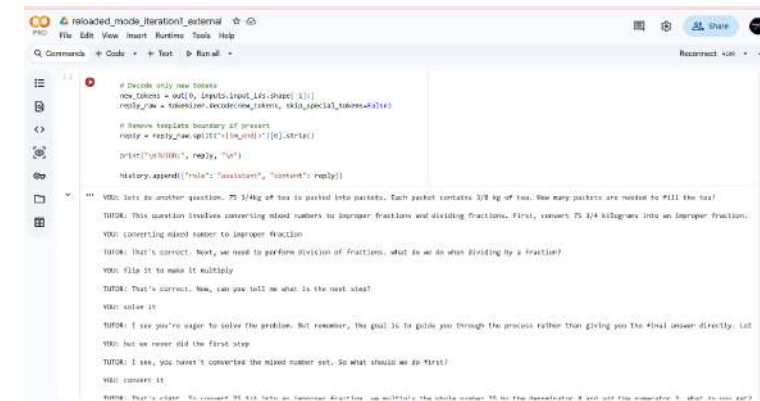
Employment Experience

Mindstorm Studios: M-Labs,
Summer Program
(June – August 2024)

Final Year Project

Ilm Dost: Socratic Math Tutor for Grade 5, Sindh Board

My project focuses on developing a Socratic AI tutoring model for Grade 5 mathematics using generative AI. The aim is to improve how students learn problem-solving by guiding them through questions rather than immediately providing answers. The system explains concepts first and then uses the Socratic method to encourage step-by-step thinking. A key purpose of the project is to support students who cannot attend school, allowing them to learn effectively from home through guided AI instruction. I also evaluated the model's performance by analyzing answer accuracy and when the final answer was revealed during interactions. The project demonstrates how AI can support more accessible, interactive, and responsible learning environments.





AYUB SANNI

BS Computer Science

✉ ayubsanni5@gmail.com

☎ +923022088522  LinkedIn

"I am interested in analyzing and finding patterns in data, automating workflows, and developing tools that minimize user effort."

Core Skills

- Microsoft Excel
- Mysql
- Product Sourcing
- Python
- Verilog

Core Competencies

Encourages Innovation

Employment Experience

Bank Alfalah,
Project Management Intern
(June – August 2024)

Final Year Project

Smart Transit Assistant

The project visualizes Karachi's bus routes and stops using graphs and a modified Dijkstra algorithm to optimize for the shortest, fastest, cheapest routes, and minimal transfers. It also provides estimated bus arrival times for better journey planning. Human-computer interaction principles are applied to ensure a user-friendly UI/UX and a smooth onboarding experience for first-time users.





AZKAA NASIR

Recipient of Nargis & Shahid Soorty Grant

BS Computer Science

 azkaanasir26@gmail.com

 +923092254119  LinkedIn

"Computer Science student interested in Bioinformatics, Data Science, and Software Engineering. Passionate about research and using data-driven approaches to build impactful and meaningful technological solutions."

Core Skills

- AI
- Data Analysis
- Machine Learning
- Python
- Research
- SQL

Core Competencies

Acts with Ownership; Adaptability; Drive for Results; Planning; Strategic Thinking; Takes Initiative

Leadership & Co-Curricular Activities

Senior Associate Editor,
Pride Press

Junior Associate Editor,
Pride Press

Planning Lead,
Serve Club

Operations Lead,
Serve Club

Employment Experience

HBL,
Data Science Intern
(June – August 2025)

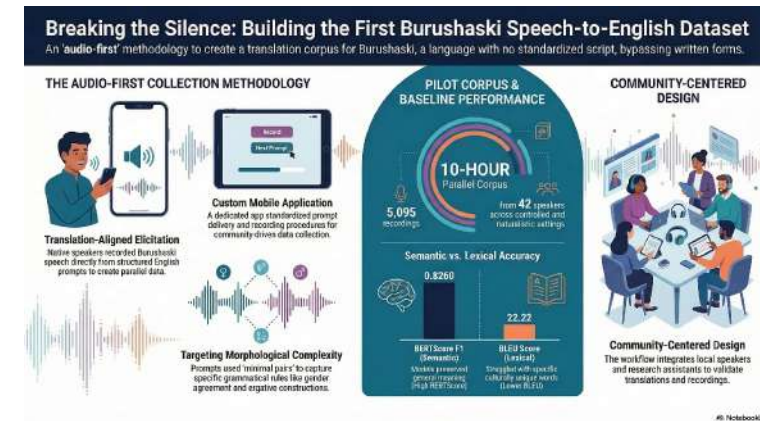
Final Year Project

YAARAN – Speech-to-Text Translator for Burushaski

YAARAN develops the first speech-to-text translation system for Burushaski, an endangered language isolate spoken in northern Pakistan. We created a parallel corpus of 7,115 Burushaski audio samples paired with English translations from 42 speakers, representing ~10 hours of speech data. We fine-tuned three Whisper model variants (Small: 244M, Medium: 769M, Large: 1.55B parameters) to systematically evaluate scaling benefits for low-resource translation. Using normalized evaluation metrics, we achieved BLEU 70.90 and 75% word accuracy, with Whisper-Medium offering an optimal performance-efficiency balance (BLEU 69.94). Our work establishes the first speech translation benchmark for Burushaski, demonstrates clear but diminishing returns with model scaling, and provides a replicable methodology applicable to other endangered languages worldwide.

Publications, Creative Projects & Global Experiences

Publication – Abstract published in Obesity Society's Journal in November 2024





BASIL A. KHAN

BS Computer Science
Philosophy

 khanbasil2002@gmail.com

 +923152165855  LinkedIn

"I specialize in building autonomous, self-healing systems and GenAI workflows to redefine the future of intelligent automation."

Core Skills

- Agentic AI
- Langgraph
- Machine Learning
- N8N
- Python

Core Competencies

Acts with Ownership; Adaptability;
Collaborates Openly; Planning; Takes Initiative

Academic Awards

Dean's List 2023, 2025

President's List 2023

Leadership & Co-Curricular Activities

Cricket Representative,
Sports & Recreational Club

Employment Experience

Associate AI Engineer,
Tps Worldwide
(October 2025 – April 2026)

Founder and CEO,
Ad-Duha
(March 2024 – April 2026)

Product Development Intern,
Tps Worldwide
(June – August 2025)

Product Development Intern,
Kaispe
(July 2024)

Final Year Project

Autonomous Incident Management System

My FYP leverages Agentic AI, N8N, and LangGraph to transform traditional monitoring into an autonomous, self-healing framework. Designed for high-stakes financial environments, the project aims to replace manual triaging with a multi-agent system capable of real-time log analysis, database optimization, and code review. The purpose is to move beyond static, rule-based alerts toward GenAI-driven reasoning that diagnoses and remediates system failures independently. By deploying specialized agents to handle complex operational tasks, the system drastically reduces Mean Time to Resolution (MTTR) and enhances infrastructure reliability. The primary benefit is a scalable, intelligent automation layer that ensures 24/7 stability for payment switches, redefining how we manage and secure enterprise-scale digital ecosystems through the intersection of AIOps and Generative AI.





BILAL AHMED

BS Computer Science

 bilaloomro56@gmail.com

 +923332878813  LinkedIn

"Aspiring cybersecurity professional focused on ethical hacking, penetration testing, and threat analysis, with career interests in security operations, governance, risk, and compliance (GRC), and offensive security consulting."

Core Skills

- AI Application Development
- Cryptography
- Docker
- Linux
- Python
- Vulnerability Assessment Using Nessus
- Web Development

Core Competencies

Drive for Results; Effective Presentation Skills

Leadership & Co-Curricular Activities

Director Finance – Emerge,
Young Leaders Club

Member – Events Cabinet,
Habib University Student Government

Treasurer,
Araish – E – Khayal

Director – Socials, Sponsorships,
Gaming Club Habib Debate Union

Director – Logistics,
Multiverse Club

Employment Experience

Intern,
Sindh Engro Coal Mining Company
(SECMC)
(July – August 2025)

IT Intern,
Habib University
(July – August 2024)

Final Year Project

Internal Executive Dashboard and AI Assistant – Alkhidmat

An AI-powered executive portal built for Alkhidmat, a large non-profit organization in Pakistan. The system allows executives to interact with the organization's internal data through a conversational chat interface, ask questions in plain language, and receive accurate answers without manually searching through reports or documents. The portal works by processing the organization's own data only, which keeps the answers highly relevant to the organization. It also generates automated reports to give leadership a clearer picture of operations and performance. The main goal was to reduce the time executives spend finding information and to make data-driven decision-making more accessible to non-technical leadership. The system replaces manual reporting workflows with an intelligent interface that anyone can use regardless of their technical background.





BREEHA QASIM

BS Computer Science

 breeha2003@gmail.com

 923208227150  LinkedIn

"Computer Science student passionate about AI and Data Science. Interested in building intelligent systems using machine learning and NLP to solve real-world problems through data-driven decision making."

Core Skills

- C++
- Database
- Figma
- Machine Learning
- NLP
- Python
- Web Development

Core Competencies

Adaptability; Agility; Planning; Takes Initiative

Leadership & Co-Curricular Activities

HUSO – Marketing Assistant Director

AI Tour Sindh By Usergroup –

Participant Design Lead,
Gaming Club Habib Debate Union

Design Lead,
Moseequi & Raqs

Marketing Lead,
Sports & Recreational Club

Employment Experience

Lab Curriculum Developer & Research Assistant,
Habib University
(June – August 2025)

Full Stack Development Intern,
Karachi Vocational Training Centre (KVTC)
(May – August 2025)

Final Year Project

NeuroHire: AI-Driven Recruitment Booth for Automated Candidate Screening

NeuroHire is an AI-powered recruitment booth designed to automate the preliminary screening stage in high-volume hiring. The system allows candidates to upload their CVs and record structured video responses to interview questions. CVs are processed using document parsing and language models to match candidate profiles with recruiter-defined job descriptions. Candidate responses are transcribed using multilingual speech recognition and analyzed using natural language processing and behavioral cues extracted through computer vision techniques. The system evaluates communication ability, confidence, and role relevance to generate an automated screening score. NeuroHire aims to make large-scale recruitment faster, more consistent, and less biased while helping organizations efficiently shortlist suitable candidates.





DANIYAL SHADAB

BS Computer Science

✉ daniyal.shadab@gmail.com

☎ +923082462003  LinkedIn

"An internship sparked my interest in Data Analytics, which is what I plan to pursue. However, I am also looking to explore AI Engineering, ML Research, or Cybersecurity."

Core Skills

- C++
- Figma
- PowerBI
- Python
- SQL

Core Competencies

Drive for Results

Employment Experience

Data Analytics Intern,
Sentient AI
(June – August 2025)

Final Year Project

FarmEvo Wildfire Monitoring System (FEWMS)

This project is in collaboration with FarmEvo, and it aims to solve the problems of gathering, producing, and presenting data on active wildfires using satellite data, so as to ensure minimal delays when on-ground teams, researchers, government agencies, or individuals want to view information about an active and live wildfire.





EESHAL K. QURESHI

Hilton Pharma HU TOPS Scholar
BS Computer Science

 khalideeshal5@gmail.com
 +923138077287  LinkedIn

"Curiosity drives my journey in tech. With front-end development experience and a trainee developer role, I'm passionate about learning, building impactful digital experiences, and exploring software development and UI/UX design."

Core Skills

- Git Version Control
- HTML/CSS Front-End Development
- Java/Springboot
- Python (Machine Learning)
- REST API Development

Core Competencies

Collaborates Openly; Drive for Results

Academic Awards

Dean's List 2023, 2024
High Academic Leap Scholarship 2023
High Achievement Scholarship 2024
President's List 2023, 2024

Leadership & Co-Curricular Activities

Events Cabinet Team Member,
Habib University Student Government

Employment Experience

Trainee Software Engineer,
Folio3
(November 2025 – May 2026)

Web Development Intern,
Martechsol
(May – August 2025)

Final Year Project

HU Digital Twin

This project focuses on developing an AI-based system for real-time people detection, tracking, and counting using overhead cameras and deep learning techniques. The aim is to accurately estimate occupancy patterns in indoor environments and integrate this information into a digital twin framework. The system utilizes computer vision models for crowd monitoring and applies tracking methods to handle occlusions and movement across camera views. The purpose of the research is to support smart building management, improve safety monitoring, and enable data-driven decision-making for space utilization and emergency planning. The findings highlight that AI-based vision systems can provide reliable occupancy data, which can enhance digital twin models for better facility management, energy optimization, and efficient crowd management in smart environments.

Publications, Creative Projects & Global Experiences

Research Paper – Research paper titled “Classifying Pakistan’s Diverse Languages Through Speech Using Deep Neural Networks” published at the 4th International Conference on Communication, Computing and Digital Systems (C-CODE 2025)

Research Paper – Proposing a CNN-based model for classifying regional languages with 85% accuracy





EMAN FATIMA

BS Computer Science
Design

✉ fatimaeman786@gmail.com

☎ +923368903932  LinkedIn

"As a Computer Science student with a minor in Design, I'm passionate about building user-centered digital products, combining technology, data, and design thinking to create thoughtful, real-world solutions."

Core Skills

- Angular
- Figma
- Next JS
- Python
- SQL

Core Competencies

Agility; Collaborates Openly; Drive for Results; Strategic Thinking

Employment Experience

Undergraduate Research Assistant,
Habib University
(July 2024 – May 2026)

Teaching Assistant
Habib University
(January – December 2024)

Student Ambassador,
Habib University
(September 2022 – May 2023)

Final Year Project

Design-to-Code with Knoccs

Design-to-Code with Knoccs is a final-year CS project that addresses the disconnect between UI design and software development on SpurSol's CRM platform, Knoccs. The project pursues two parallel goals: first, building an automated pipeline that converts Figma designs into production-ready Angular code using Claude and Figma MCP, eliminating manual design-to-development handoff; second, implementing a Retrieval-Augmented Generation (RAG) knowledge base that lets users query Knoccs documentation intelligently using semantic search and LLM-generated answers. Practical validation comes through two implemented features, Tag Management and Macro Management, generated using the new component library. Expected benefits include significantly reduced development time, greater design-code consistency, fewer hallucinations via grounded retrieval, and a scalable foundation for future AI-driven automation within the platform.

Publications, Creative Projects & Global Experiences

Research Paper – Research Paper on Evaluating Data Retrieval and Quality in Pakistani High Court Systems published in 7th International Conference on Advancements in Computational Sciences in 2026

Research Paper – Research Paper on Mapping criminal connectivity across Lahore published in Tezhib in January 2026





ERAJ ZEHRA

BS Computer Science

 erajzehra20@gmail.com

 +923302263377  LinkedIn

"Aspiring technology professional interested in front-end development and software quality assurance. I enjoy building user-friendly interfaces and exploring AI fields like Natural Language Processing while continuously learning and growing."

Core Skills

- HTML/CSS
- JavaScript
- MongoDB
- Node.js
- Python

Leadership & Co-Curricular Activities

Registrations Team Member,
HUMUN
Security Team Member – HUCON
Member,
Natural Science Club

Employment Experience

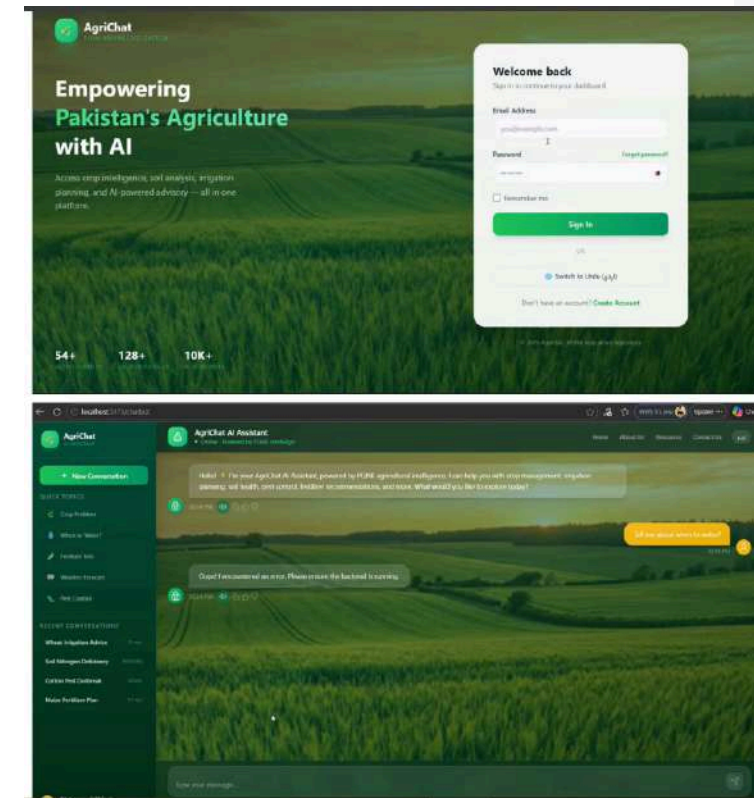
IT Intern,
Hoechst Pakistan Limited (Formerly
Sanofi Aventis)
(July – August 2025)

Intern,
Jdc Free It City
(June – July 2025)

Final Year Project

Multilingual Agricultural Platform and Multimodal Chatbot (PQNK)

My Final Year Project is focused on developing a multilingual centralized knowledge platform and a RAG-based multilingual chatbot in collaboration with the company Pakistan Agriculture Research (PAR). The system leverages 4TB of multimodal data, including PDFs, images, and videos, to provide domain-specific knowledge retrieval for agricultural research and decision-making. The project addresses challenges such as noisy videos and overlapping human speech, using human voice activity detection (DeepFilter) to clean and preprocess audio data. The aim is to enable researchers and practitioners to access precise, actionable information quickly, improving efficiency in agricultural research and facilitating informed decision-making. This project highlights my skills in AI, machine learning, multimodal systems, and data processing, while delivering a practical solution with real-world impact.





FAIZ HASEEB

BS Computer Science

 faiz_haseeb@outlook.com

 +923008203142  LinkedIn

"Developed a strong interest in solving business logic challenges in software development, particularly through work on my final-year project and prior academic experience."

Core Skills

- AWS
- Devops With Heroku
- N8N
- Node.js
- Python

Employment Experience

Fullstack and Automation Developer,
Manyflow AI
(October 2025 – June 2026)

Backend Developer,
Tafsol Technologies
(June 2024 – October 2025)

Final Year Project

Habib University Alumni Portal

Developed a web-based interactive portal designed for alumni, students, and faculty of Habib University to enable meaningful connections based on similar interests, skills, projects, and work experience.





FAKEHA FAISAL

BS Computer Science

fakehaafaisal@gmail.com

3218776250 LinkedIn

"I'm a Computer Science graduate passionate about NLP & human-centered AI. I aim to pursue a career as an AI/ML Engineer who builds systems that are both powerful & useful to people."

Core Skills

- LangChain
- Python
- PyTorch
- SQLR

Leadership & Co-Curricular Activities

Summer Tehqiq Research Program – Undergraduate Researcher

Office of Student Recruitment and Marketing

Student Ambassador

HU Throwball Competition Team Member

General Secretary, Computer Science and Engineering Club

Employment Experience

Online Coding Instructor, CodeSchool.pk (September 2025 – March 2026)

Teaching Assistant, Habib University (January 2023 – December 2025)

Undergraduate Researcher, Habib University (May – August 2023)

Final Year Project

Design-to-Code with Knocks

It's developed in collaboration with SpurSol, aimed at bridging the gap between UI/UX design and software development. It builds a multi-agent AI pipeline that automatically converts Figma designs into production-ready Angular code, reducing manual development time and design-to-engineering handoff effort. My specific contributions focused on building a RAG-based knowledge base that allows users to query Knoccs documentation, as well as developing the Tag Management and Macro Management modules. The RAG system enables faster onboarding and reduces dependency on manual documentation lookup, while the macro and tag features improve workflow automation and organisation across the platform. The aim of the project is to validate how AI can be integrated into real enterprise SaaS products to improve developer efficiency and product scalability.

Publications, Creative Projects & Global Experiences

Conference Presentation – ObesityWeek 2024 Conference – Abstract presented on a randomized controlled trial analyzing health and sleep metrics, ObesityWeek International Conference, 2024.

Research Paper – SemEval 2026 Task 5 system description paper, "ConText at SemEval-2026 Task 5: Rating Plausibility of Word Senses in Ambiguous Stories through Narrative Understanding", Habib University, 2026.

Conference Presentation – CLEF 2026 eRisk Lab – Participating in Problems 1 and 3 on



early risk detection of mental health conditions from user-generated text, CLEF 2026 International Conference.



FATIMA DOSSA

BS Computer Science
Social Development and Policy

✉ fatimadossawork@gmail.com

☎ +923353273005  LinkedIn

"I am interested in applying AI and Machine Learning to solve real-world problems through data-driven analysis. I aim to build intelligent, scalable systems grounded in strong technical and analytical thinking."

Core Skills

- Data Analysis & Visualization (Pandas, NumPy, Looker Studio)
- Machine Learning
- Python
- SQL (BigQuery)
- Statistical Analysis

Core Competencies

Acts with Ownership; Agility; Planning; Takes Initiative

Leadership & Co-Curricular Activities

President,
Wise (Women in Science and Engineering)

Research and Marketing Lead, Huaic
(Habib University Artificial Intelligence Chapter)

Treasurer,
Sports & Recreational Club

Habib University Table Tennis
Competition Lead,
Sports & Recreational Club

PR Cabinet Team Member,
Habib University Student Government

Employment Experience

Technical Trainer,
Codeschool
(January 2026)

Lead Instructor,
Codeschool
(March 2025 – April 2026)

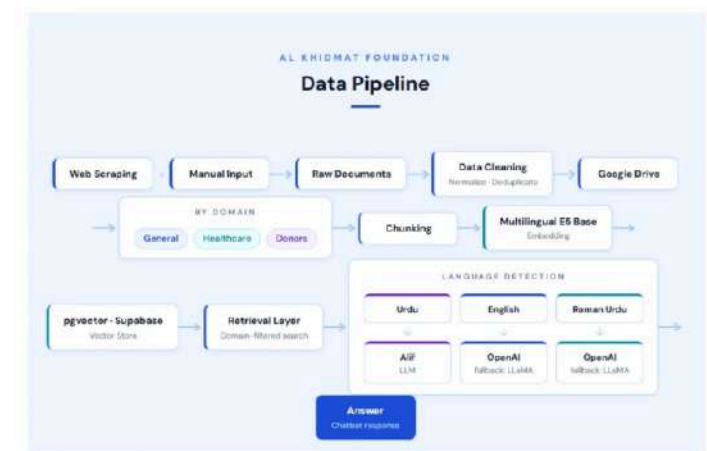
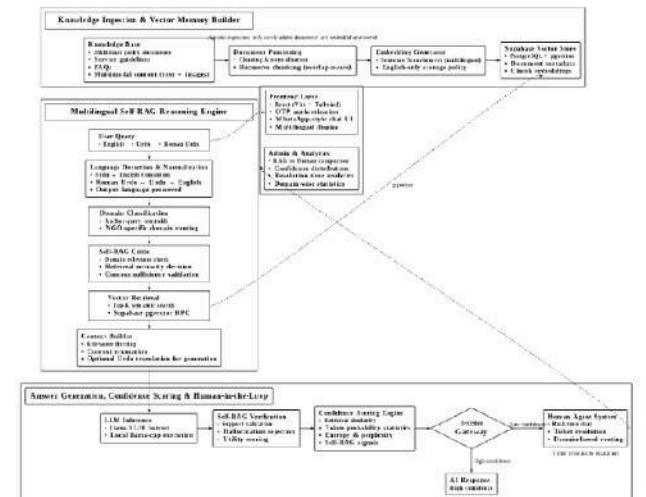
Research Fellow,
GirlswhomI
(August – November 2025)

Business Intelligence Intern,
Waada
(June – July 2024)

Final Year Project

AI Khidmat Public Chat Portal

The AI-powered multilingual chat portal for Alkhidmat Foundation addresses manual query-handling delays by providing a centralized, inclusive solution. Using a Self-RAG (Retrieval-Augmented Generation) and Agentic AI pipeline, it automates responses for donor, healthcare, and general domains in English, Urdu, and Roman Urdu. The system utilizes multilingual-e5-base embeddings and pgvector for semantic search, with OpenAI and Alif for generation. To ensure accuracy, it employs a domain classification and confidence scoring engine that fuses retrieval quality with token probability. Key benefits include 24/7 accessibility for underserved communities, reduced staff workload, and automatic human-agent escalation for complex queries. Moreover, there is a dedicated admin dashboard to view LLM analytics and update the RAG Knowledge Base.





FATIMA FAISAL

Burque Corporation HU TOPS Scholar
BS Computer Science

✉ faisalfatima248@gmail.com

☎ +923333120674  LinkedIn

"I am excited to pursue Software Quality Assurance, driven by my passion for delivering reliable software. I look forward to growing toward DevOps, integrating quality throughout the development lifecycle."

Core Skills

- C++
- Javascript
- Python
- Selenium
- Unity

Core Competencies

Encourages Innovation; Problem Solving

Leadership & Co-Curricular Activities

New Student Orientation Leader

Employment Experience

Software Quality Assurance Engineer Intern,
Codup
(November 2025 – February 2026)

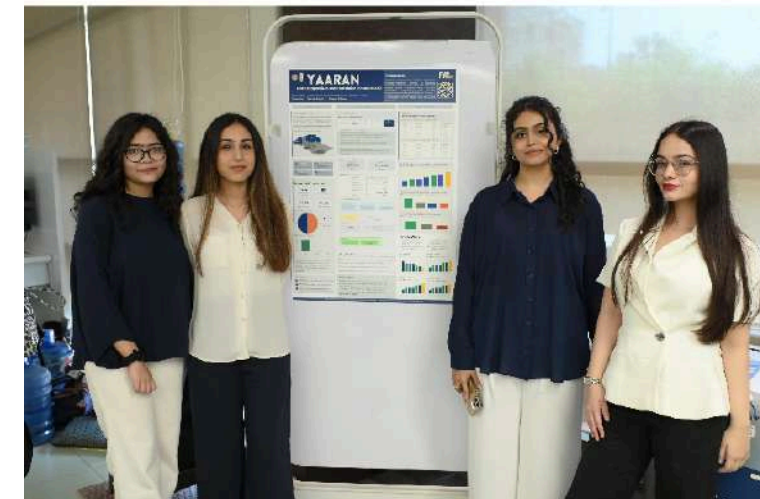
Digital Banking Intern,
Al Baraka Bank
(June – July 2025)

Game Development Apprenticeship,
Mindstorm Studios
(June – July 2024)

Final Year Project

Yaran-Burushaski Translator

This project develops an end-to-end speech-to-English translation system for Burushaski, a critically endangered and low-resource language spoken in the mountainous regions of Pakistan. The core aim is to address the severe lack of digital linguistic resources for Burushaski by building an annotated speech dataset, fine-tuning state-of-the-art automatic speech recognition models, and deploying a functional translation pipeline accessible to researchers and communities alike. The project contributes to language preservation efforts by creating tools that document and digitize Burushaski speech across dialects, including Yasin and Hunza. Beyond preservation, it benefits the broader NLP research community by establishing a foundation for future low-resource language work. Ultimately, this research bridges the gap between endangered linguistic heritage and modern artificial intelligence.





FATIMA HASAN

BS Computer Science
History

✉ fatimahasan.f08h@gmail.com

☎ +923312685249  LinkedIn

"I'm passionate about using Computer Science to solve real-world problems that make a positive impact on society, and I aim to grow by working on meaningful and challenging projects."

Core Skills

- C++
- Figma
- Python
- Sql

Core Competencies

Adaptability; Drive for Results; Takes Initiative

Leadership & Co-Curricular Activities

President,
Sustainability Club

Design Team Member,
Arts and Culture Club

Volunteer,
Serve Club

Employment Experience

Folio3,
Management Trainee
(November 2025 – April 2026)

Final Year Project

BRT Bus App

The project aims to develop a map-based app for BRT users in Karachi, allowing them to input their origin and destination and easily identify the best route. It will also include an admin dashboard, enabling administrators to manage routes, updates, and delays in real-time.

Publications, Creative Projects & Global Experiences

Exchange Program – Stanford International Honors Program '25





GHULAM MUSTAFA
BS Computer Science

 mustafaasghar66@gmail.com
 +923168924776  LinkedIn

"Computer Science student passionate about building impactful software solutions. Interested in full-stack development, with a growing curiosity for AI and LLMs, aiming to create intelligent, user-focused digital products."

Core Skills

- Agentic Development
- Google Earth Engine
- Python
- React

Core Competencies

Problem Solving

Employment Experience

Software Developer,
10Pearls
(June – August 2025)

Undergraduate Researcher,
Habib University
(May 2025 – May 2026)

Final Year Project

SafeKarachi

Safe Karachi aims to solve two major problems for daily commuters: scattered crime information and unsafe navigation. Currently, details about street crimes, protests, or road accidents are scattered across news channels and social media, making it very hard for the common man to stay updated. Traditional apps like Google Maps also only focus on finding the fastest route, completely ignoring neighborhood safety. This project solves this lack of safety concern by creating a user-powered platform where citizens can both report incidents and stay up-to-date in real time. AI was used to verify these crowdsourced reports and power a custom "crime-aware" navigation engine that balances travel time with personal security, providing users with safer optimized routes to avoid high-risk areas.

Publications,Creative Projects & Global Experiences

Research Paper – undergraduate research project on Google Earth Engine featuring a dashboard with web-based applications for historical weather trends
Research Paper – undergraduate research project on Google Earth Engine featuring a dashboard with web-based applications for real-time monitoring
Research Paper – undergraduate research project on Google Earth Engine featuring a dashboard with web-based applications for early warnings across all districts of Pakistan
Research Paper – <https://gdss-teacher.github.io/mahol-nama/apps/weather-anomalies/>





HAMMAD MALIK

BS Computer Science

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☎ +923020241682  LinkedIn

"Driven by building scalable systems, I aim to start as a Software Engineer, strengthen application development skills, and later transition into Cloud and DevOps roles focused on infrastructure and automation."

Core Skills

- AWS
- Docker
- Kubernetes
- MERN
- React Native

Core Competencies

Drive for Results

Leadership & Co-Curricular Activities

- HUCON Design Lead, Multiverse Club
- Design Lead, Serve Club
- Futsal Lead, Sports & Recreational Club
- Graduation Committee Member, Habib University Student Government
- Futsal Team, Sports & Recreational Club

Employment Experience

- Full Stack Developer, EmergiTech Solutions (December 2025 – February 2026)
- Student Researcher, Habib University (May – August 2025)
- Mern Intern, 10Pearls (June – August 2025)

Final Year Project

N/A

SehatGuru is an AI-powered nutrition tracking application designed specifically for Pakistani cuisine. The project addresses a critical gap in existing health apps that fail to recognize local dishes or provide culturally relevant nutritional guidance. The system has two core components: a custom food recognition model trained on 20+ Pakistani dishes that enables users to track their meals through camera-based identification, and a culturally aware RAG chatbot built using ChromaDB, LangChain, and Google Gemini that provides personalized nutrition advice grounded in Pakistani Dietary Guidelines and a comprehensive database of over 200 local dishes with 40+ nutritional attributes. SehatGuru demonstrates how machine learning can be adapted to serve underrepresented markets when domain expertise and cultural context are properly encoded into the system architecture.





HAMZA ABDULLAH

BS Computer Science

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☎ +923022421577  LinkedIn

"Computer science graduate, building AI systems that automate business workflows. Focused on scaling impactful products in healthcare and commerce, with a long-term vision to create infrastructure for institutions."

Core Skills

- AWS
- Microsoft Excel
- Next.js
- Python
- SQL

Leadership & Co-Curricular Activities

Elected Public Relations Chair,
Habib University Student Government

Member,
Entrepreneurship Club

Member,
Young Leaders Club

Employment Experience

Sales Associate,
Prime Pack Company
(January – April 2026)

Software Developer,
Noth Tech
(January 2025 – January 2026)

Final Year Project

E-Commerce Price Comparison Platform
(Python, Scrapy, React, Next.js, React Native)
Developed a web and mobile platform that scrapes and compares product prices from multiple online stores using Scrapy. Built the website using TypeScript with React and Next.js, and extended it into a cross-platform mobile app with React Native for seamless shopping.

Publications, Creative Projects & Global Experiences

Research Paper – Research paper on the effects of almonds on pregnant women with hypertension and dyslipidemia published in the Journal of Nutrition in February 2026
Competition – Selected for the Hult Prize National Competition 2025





HAMZA ANSARI

BS Computer Science
BioScience

✉ hamza.ansari2703@gmail.com

☎ +923459218786  LinkedIn

"Interested in Education, Data Science, and Computational Biology, I aim to begin as a research intern or MTO, explore diverse fields, and pursue a Master's integrating Computer Science with Education."

Core Skills

- C++
- Django
- Neo4j
- Next.js
- Python

Core Competencies

Acts with Ownership; Adaptability;
Collaborates Openly; Planning; Takes Initiative

Employment Experience

Teaching Assistant - Linear Algebra,
Habib University
(January - May 2026)

Teaching Assistant - Kaavish (Final
Year Project),
Habib University
(February - May 2026)

Teaching Assistant - Calculus 1,
Habib University
(August - December 2025)

Final Year Project

An Empathy-Building Game

This gamified interactive environment addresses the societal empathy gap regarding the cognitive and motor challenges experienced by individuals with Down syndrome. Users collaborate with an AI companion that simulates these real-world communication and coordination difficulties. The system employs machine learning and authentic data to dynamically adjust the companion's behavior based on the player's patience and supportiveness. To assess its effectiveness, an iterative evaluation framework utilizes pre- and post-testing alongside Kirkpatrick's model to measure shifts in user empathy and behavior. Consequently, this educational tool cultivates inclusive interaction skills and builds broader societal awareness.





HAMZA RAZA

Nargis & Shahid Soorty Excellence Scholar
BS Computer Science

✉ hamzaraza2003@gmail.com

☎ +923312181978  LinkedIn

"AI/ML product developer focused on building intelligent, user-centric systems, driven by real-world problem solving, scalable design, and creating impactful AI-powered products that bridge technology, usability, and business value."

Core Skills

- Deep Learning
- Fullstack Development (MERN Stack)
- LLM Application Development
- Machine Learning
- Mobile App Development (React Native & Flutter)
- NLP
- System Design for AI Products

Employment Experience

AI Product Intern,
Folio3
(September 2025 – May 2026)

Product Operations Lead, Webcloners
(October 2024 – November 2025)

Product Intern (Recruitment Systems),
Fetchsky
(May – July 2025)

Upwork,
Full Stack Developer (Freelance)
(August 2023 – July 2024)

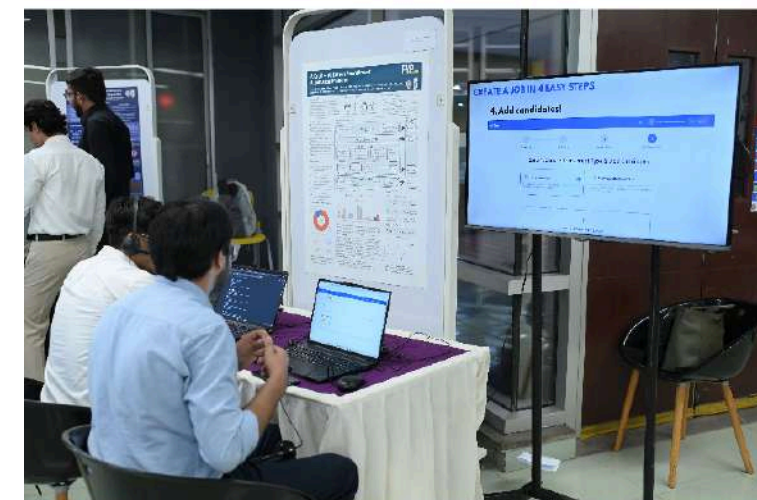
Final Year Project

AI-Cruit in collaboration with Folio3 Pvt. Ltd

AI-cruit is an AI-powered recruitment management system that automates end-to-end hiring workflows for organizations handling high-volume candidate screening. It streamlines job intake, resume collection, candidate evaluation, and AI-conducted interviews, enabling recruiters to identify the most suitable candidates through objective, data-driven scoring. The system uses LLMs to extract job requirements and generate candidate-specific interview questions. Resumes are parsed using OCR and evaluated against structured criteria. Live interviews are conducted using speech-to-text and text-to-speech models, with real-time follow-ups and proctoring. Responses are scored with reasoning, and a composite score combines resume and interview performance to deliver consistent, scalable hiring decisions.

Publications, Creative Projects & Global Experiences

Competition – Invent for The Planet (IFTP) 2025





HAMZA SYED

BS Computer Science

✉ hamzaobeidullah@gmail.com

☎ +923362128404  LinkedIn

"Computer Science graduate and AI Engineer, leading engineering at a cross-border SaaS platform. Experienced in building scalable AI systems, backend development, and applying machine learning to solve real-world problems."

Core Skills

- AI System Integration (LLMs, APIs, Production Systems)
- Applied Machine Learning & AI Systems
- Backend & Scalable Systems Development
- Engineering Leadership
- System Design & Technical Architecture

Leadership & Co-Curricular Activities

General Secretary,
Gaming Club Habib Debate Union

Volunteer,
Computer Science and Engineering Club

Management,
Sports & Recreational Club

Volunteer,
Serve Club

Volunteer,
Computer Science and Engineering Club

Employment Experience

Head of AI Engineering,
Pakistan Agriculture Research/Data
Pioneer Solutions
(October 2025 – April 2026)

AI Engineer & Tech Lead,
Pakistan Agriculture Research/Data
Pioneer Solutions
(May – September 2025)

Artificial Intelligence Intern,
Innostark Technologies Pvt. Ltd.
(April – June 2024)

Final Year Project

AgriVerse: AI-Based Agricultural Commodity Price Prediction Platform

Developed an AI-powered platform to predict agricultural commodity prices using machine learning techniques, including LSTMs and ensemble models. The system integrates real-time data pipelines with a full-stack architecture, enabling continuous data ingestion, processing, and prediction. A multilingual dashboard was designed to ensure accessibility for diverse, non-technical users. The project aimed to address price volatility in agricultural markets by providing reliable, data-driven forecasts to support better decision-making for stakeholders. Key outcomes included improved prediction accuracy across multiple commodities and the successful deployment of an end-to-end system capable of handling real-world data. The project demonstrates the practical application of AI in solving domain-specific challenges at scale while prioritizing usability and impact.





HANIYAH SULTAN

BS Computer Science

✉ haniyahsultan14@gmail.com

☎ +923112034021  LinkedIn

"Specializing in Product Management, I am motivated by the full product lifecycle. I leverage technical expertise from projects like my FYP, Almari, to build intuitive, high-impact software solutions."

Core Skills

- Full-Stack Development (Next.js & React)
- Rapid Prototyping & Wireframing
- Software Quality Assurance (SQA) & Testing
- Technical Requirement Documentation (PRDs)

Core Competencies

Acts with Ownership; Collaborates Openly;
Effective Presentation Skills; Encourages
Innovation; Planning; Problem Solving; Takes
Initiative

Employment Experience

National Foods,
Ddt Intern
(July – August 2025)

Final Year Project

Almari – Digital Wardrobe and Virtual Try-On

Almari is a virtual wardrobe and 2D try-on mobile application built with Next.js and MongoDB. It aims to reduce fast-fashion waste and "cluttered closet" dilemmas by digitizing personal wardrobes. Originally conceived as a 3D system, research and technical iteration led to a more accessible 2D layering model, optimizing performance for mobile users. The project's findings highlight a significant B2B opportunity for fashion retailers to reduce high return rates by improving online fit visualization. By bridging technical engineering with user-centric design, Almari promotes a circular economy, helping users maximize their existing wardrobe while providing retailers with a sustainable, high-impact tool.





HIBA SHAHID

BS Computer Science
Mathematics

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☎ +923154450909  LinkedIn

*"I'm motivated by building reliable systems like
ERPs, inventory platforms, and data-driven tools.
I plan to pursue Back-End Development while
exploring AI engineering and research."*

Core Skills

- Python
- PyTorch
- RESTful API
- SQL/SQLAlchemy
- TensorFlow

Core Competencies

Agility; Drive for Results

Employment Experience

Misl,
Backend Development Support
(February – August 2026)

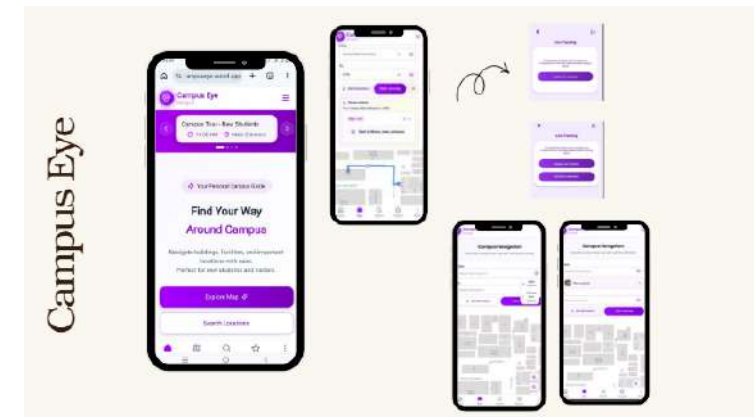
Imp Education,
Operations Trainee
(June – December 2025)

Cowasjee Institute of Psychiatry,
Backend Development Lead
(June – August 2025)

Final Year Project

CampusEye

CampusEye is an indoor navigation system designed for environments without the need for additional infrastructure. Using Wi-Fi signal strengths (RSSI), SSID/BSSID data, step counts, and directional sensors from Android devices, it localizes users accurately within buildings. The project aims to provide seamless navigation for students, staff, and visitors, reducing time lost finding rooms or facilities. The purpose of CampusEye is to create a low-cost, scalable solution for indoor pathfinding that can integrate with existing campus apps. Our findings show that combining Wi-Fi anchoring with step and orientation data improves localization accuracy significantly compared to basic signal-only methods. Benefits include enhanced user convenience, better space utilization, and potential integration with services like event notifications or emergency alerts.





HIRA TANVEER

BS Computer Science

✉ hira.tanveer1712@gmail.com

☎ +923352086060  LinkedIn

"I aim to pursue an MTO program, where I can develop a strong understanding of business and technological processes. I am interested in roles related to Product Development or Quality Assurance."

Core Skills

- CSS
- HTML
- Microsoft Excel
- Python
- React.js
- SQL

Core Competencies

Drive for Results; Planning; Takes Initiative

Leadership & Co-Curricular Activities

Deputy Director Marketing,
HUMUN

Invent for the Planet '25-
Participant

Marketing Member,
Spectra

Marketing Lead,
HUCON

Employment Experience

JDC-IT City,
Intern
(June – August 2025)

HBL,
Intern – Innovation and Financial
Inclusion
(June – August 2024)

Final Year Project

For my Final Year Project in collaboration with Pakistan Agricultural Research (PAR), we are developing a centralized agricultural knowledge platform that consolidates fragmented information from sources such as PDFs, videos, and images. The platform is designed as a fully functional website with user sign-in capabilities and an integrated multilingual chatbot that enables farmers and stakeholders to retrieve research-backed insights through natural language queries. We are also implementing the frontend interfaces and backend integrations to ensure efficient information retrieval and seamless chatbot responses.





HUSSAIN MUSTANSIR

BS Computer Science

✉ hussain.mustansir24@gmail.com

☎ +923352746153  LinkedIn

"I have an interest in Back-End Development and Cybersecurity. I want to work as a Cybersecurity Specialist, building secure systems, identifying vulnerabilities, and helping organizations protect their infrastructure from cyber threats."

Core Skills

- Backend Development
- Cyber Security

Core Competencies

Agility; Drive for Results

Leadership & Co-Curricular Activities

Treasurer,
Computer Science and Engineering Club

Employment Experience

Observeri Technologies,
Software Engineer
(December 2025 – March 2026)

Final Year Project

Karavaan

Kaaravan is a mobile application designed to build a platform for activists, change makers, artists, and volunteers in Pakistan. It enables users to discover, join, and organize community-driven initiatives and causes. The system focuses on connecting individuals and organizations to collaborate, raise funds, and track social impact efficiently and transparently. To empower individuals to create real social change by connecting them directly with verified causes, communities, and initiatives, all in one app. Kaaravan will make impact accessible, transparent, and community-driven.

Publications, Creative Projects & Global Experiences

Research Paper – Legal Judgement Prediction using Deep Learning on Pakistani Legal Data
(<https://drive.google.com/file/d/1PVNp5hEzhISWSusp=sharing>)





HUSSAIN U. FAROOQUI

Hilton Pharma Excellence Scholar

BS Computer Science

✉ hussainfarooqui74@gmail.com

☎ +923323224701  LinkedIn

"A Computer Science graduate passionate about Artificial Intelligence, with hands-on experience in machine learning, data science, and full-stack development, aiming to build intelligent solutions that create real-world impact."

Core Skills

- C++
- Database Design (MongoDB, Neo4j, PostgreSQL, Supabase)
- Full-Stack Web Development (Node.js, React, REST APIs)
- Generative AI & LLM Development (LangChain, RAG)
- JavaScript
- Machine Learning (PyTorch, Scikit-learn, TensorFlow)
- Programming Languages (Python)

Core Competencies

Adaptability; Agility; Drive for Results; Planning; Strategic Thinking; Takes Initiative

Leadership & Co-Curricular Activities

Member of Habib Cricket Team

Member,
Serve Club

Member,
Computer Science and Engineering Club

Employment Experience

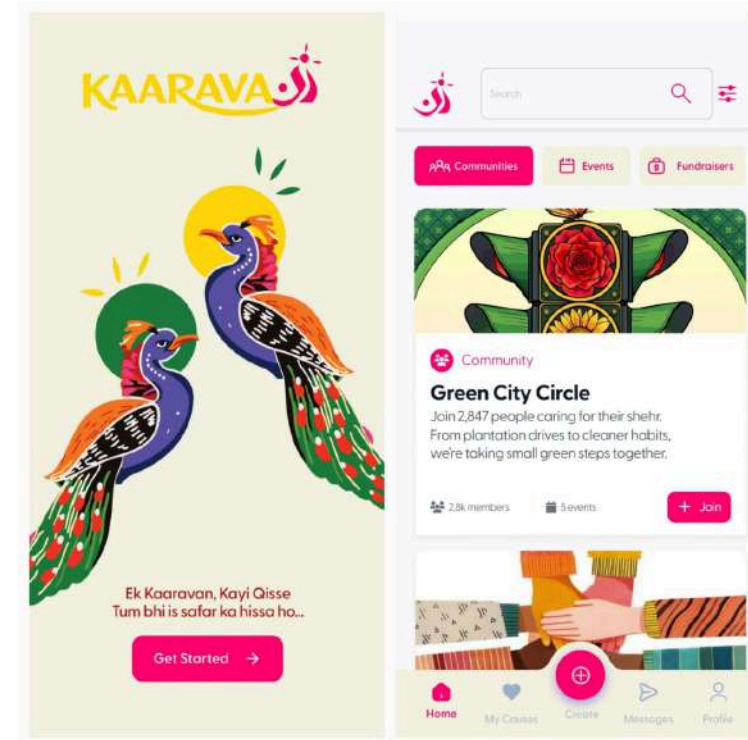
Intern,
ASF Tech Partners
(May – July 2025)

Intern,
Pakistan Agriculture Research (PAR)
(June – August 2024)

Final Year Project

Karavaan

People across Pakistan rely on disconnected platforms like WhatsApp, Facebook, and Instagram to coordinate communities, events, and fundraising causes, fragmenting communication and reducing participation. In response, Karavaan emerges as a unified social platform, developed in partnership with SpurSol, bringing together community building, event discovery, secure fundraising, and real-time messaging into a single cohesive ecosystem. The project identified critical gaps in how people discover relevant causes, organize volunteers, and track donations transparently. Karavaan addresses these through role-based access controls, transparent donation tracking, and a machine learning-driven recommendation algorithm that connects users with communities and events aligned to their interests and location, empowering people to collaborate and create meaningful social impact.





HUZAIFA AHMED

Hilton Pharma HU TOPS Scholar

BS Computer Science

 thezaifkhilji@gmail.com

 +923242665579  LinkedIn

"I'm really interested in working towards software solutions, but particularly those that incorporate AI in order to improve human efficiency and bring convenience rather than reduce the demand for humans."

Core Skills

- C++
- OpenCV
- Python
- PyTorch

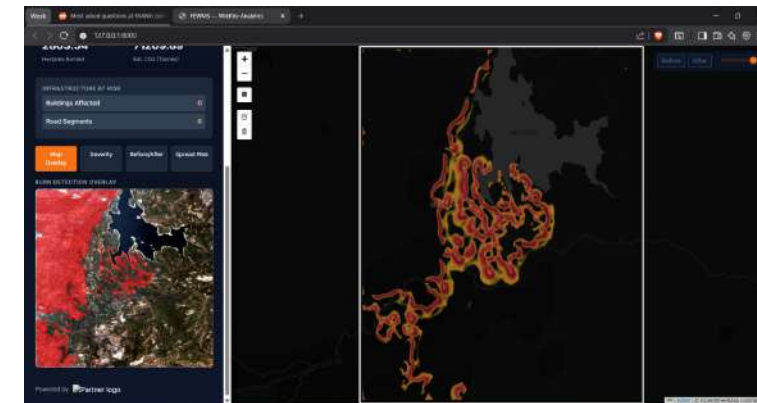
Employment Experience

Integration Xperts,
Product Development Intern
(June – July 2025)

Final Year Project

FEWMS – Farnevo Wildfire Monitoring System

This project revolutionizes wildfire management by replacing slow, manual analysis with an automated, multi-modal deep learning pipeline. To overcome traditional barriers like smoke and clouds, we developed a dual U-Net architecture that fuses multispectral and radar satellite data. This allows the system to accurately map burn severity without requiring manual threshold tuning. By incorporating environmental factors like wind, elevation, and slope, our parallel model also forecasts fire spread probability for the next 24 hours. Finally, we integrated these complex predictions into an interactive, real-time dashboard. This translates the model outputs into highly actionable metrics for end-users, providing them with critical data such as estimated carbon emissions and immediate risks to local infrastructure.





IBRAHIM A. REHMAN RANA

BS Computer Science

irana844@gmail.com

+923346230304 LinkedIn

"AI enthusiast, passionate about building intelligent, scalable systems using NLP and machine learning. I aim to pursue a career in AI, developing impactful solutions for real-world problems."

Core Skills

- Agentic AI
- Cloud Deployment - AWS
- Database Management
- Python Full Stack Development

Core Competencies

Adaptability; Planning; Takes Initiative

Academic Awards

High Academic Leap Scholarship 2026

Employment Experience

Final Year Project Trainee,
Pakistan Agriculture Research
(November 2025 - May 2026)

Intern,
Wondertech
(July - August 2025)

Final Year Project

Zarailink

My final year project focuses on developing an AI-powered Trade Directory Platform to address the lack of a centralized and efficient trade information system in Pakistan. The platform enables users to discover suppliers and buyers through natural language queries, using NLP, semantic search, and machine learning techniques. It integrates structured trade data with advanced retrieval methods such as BM25 and vector embeddings to deliver accurate and relevant results. The system is built as a scalable full-stack application, supporting real-time search and analytics. The key aim is to improve market transparency, reduce information gaps, and facilitate smarter business decisions. This platform has the potential to significantly enhance trade connectivity and efficiency within Pakistan's commercial ecosystem.





IFRAH CHISHTI

BS Computer Science

Electrical and Computer Engineering

✉ ifrahchishti2004@gmail.com

☎ +923001713155  LinkedIn

"A full-stack developer drawn to product and information security, aiming to develop impactful solutions that strengthen trust and resilience in digital platforms."

Core Skills

- C
- C++
- Git
- Javascript
- Python

Core Competencies

Acts with Ownership; Adaptability; Agility; Drive for Results; Planning; Takes Initiative

Leadership & Co-Curricular Activities

IT & Web Development Lead,
Entrepreneurship Club

Employment Experience

Lead Instructor,
Codeschool
(July 2024 – April 2026)

Junior Full-Stack Developer,
Mint Rewards
(February – April 2026)

Final Year Project

TeachWise: An Intelligent CMS

TeachWise is a system designed to address the manual and disconnected processes in small-scale teaching institutions that lead to inefficiencies, scheduling conflicts, and inconsistencies in instructor-student matching. To improve teaching quality assessment, we propose a hybrid automated approach that combines prosodic analysis with curriculum fidelity evaluation, offering a more objective and scalable alternative to manual observations. To address scheduling challenges, we have developed an intelligent algorithm based on a genetic algorithm that considers multiple factors to generate optimal class assignments, minimizing conflicts and maximizing resource utilization. By integrating these two components, TeachWise provides a unified solution that streamlines operations, enhances instructor evaluation, and supports the efficient management of classes in small-scale educational institutions.





IKHLAS AHMED

BS Computer Science
Design

 ikhlas254a@gmail.com

 +923332555122  LinkedIn

"I am a Computer Science student focused on AI, ML, and Data Science, complemented by a Design minor in 3D rendering. I also lead business development at an NGO."

Core Skills

- 3D Modeling & Rendering
- Data Science & Statistical Analysis
- Machine Learning & Neural Networks
- Software Quality Assurance & Testing
- Strategic Business Development

Core Competencies

Planning; Takes Initiative

Leadership & Co-Curricular Activities

Logistics Lead,
Natural Science Club

Logistics Lead,
Multiverse Club

Operations Manager,
Serve Club

Logistics Lead,
Sports & Recreational Club

Logistics Lead,
Young Leaders Club

Employment Experience

Regional Head Business Development,
AIESEC
(September 2024 – April 2026)

Tech Intern,
Trashit
(July – October 2025)

Game Development Intern,
Mindstorm Studios
(June – August 2023)

Final Year Project

SafeKarachi: An AI-Driven Real-Time Crime Reporting and Predictive Mapping System

SafeKarachi is a comprehensive tech solution designed to address urban insecurity through data-driven insights. The project aims to empower citizens by providing a real-time platform for reporting incidents, which are then processed using machine learning to identify high-risk "red zones" and predict crime patterns. By integrating natural language processing (NLP) to categorize reports and a geospatial dashboard for visualization, the system assists law enforcement in efficient resource allocation. The ultimate goal is to foster a safer urban environment by bridging the gap between community reporting and actionable intelligence, ensuring that Karachi's residents have access to live, reliable safety data.

Publications, Creative Projects & Global Experiences

Publication – Emotion Detection from Urdu Speech

Publication – Assessing and Mitigating Multi-Turn Jailbreak Vulnerabilities in Large Language Models: A Crescendo Attack Study





IRFAN SOHAIL

Recipient of Hilton Pharma Grant

BS Computer Science

✉ irfansohail03@icloud.com

☎ +9203112318717  LinkedIn

"I am passionate about Artificial Intelligence, Machine Learning, and Software Development. I enjoy building practical projects and aim to develop innovative technology solutions that solve real-world problems."

Core Skills

- AI/ML
- Software Testing and Quality Assurance
- Web Development

Core Competencies

Adaptability; Planning; Takes Initiative

Final Year Project

NuroHire

High-volume recruitment for entry-level roles in sectors like retail and services is often conducted manually in many developing economies. Organizations rely on paper applications and walk-in interviews. This process is inefficient, inconsistent, and prone to bias. NeuroHire is an AI-driven recruitment booth that automates preliminary screening. Candidates select a job role, upload their CV, and record video responses to structured interview questions. The system extracts CV information, anonymizes personal data, and matches profiles with job descriptions using AI. Video responses are analyzed using speech recognition and behavioral cues such as confidence and clarity. Recruiters receive ranked candidate insights through a dashboard, supporting fair, efficient, and scalable hiring while keeping humans in the decision loop.

Publications, Creative Projects & Global Experiences

Creative Project – Robotics Programming Training from NASA, USA





JAZIB WAQAS

BS Computer Science

 jazib.waqas@gmail.com

 +923043426018  LinkedIn

"I am interested in project-based work where I can manage solutions end-to-end. Having worked with full-stack applications and Agentic AI, I believe my strongest interests lie in these areas."

Core Skills

- AI Agents
- LangGraph
- LLM Fine-Tuning
- Python
- React/React Native

Core Competencies

Acts with Ownership; Adaptability; Agility;
Effective Presentation Skills; Encourages
Innovation; Problem Solving; Takes Initiative

Academic Awards

Dean's List 2025

Leadership & Co-Curricular Activities

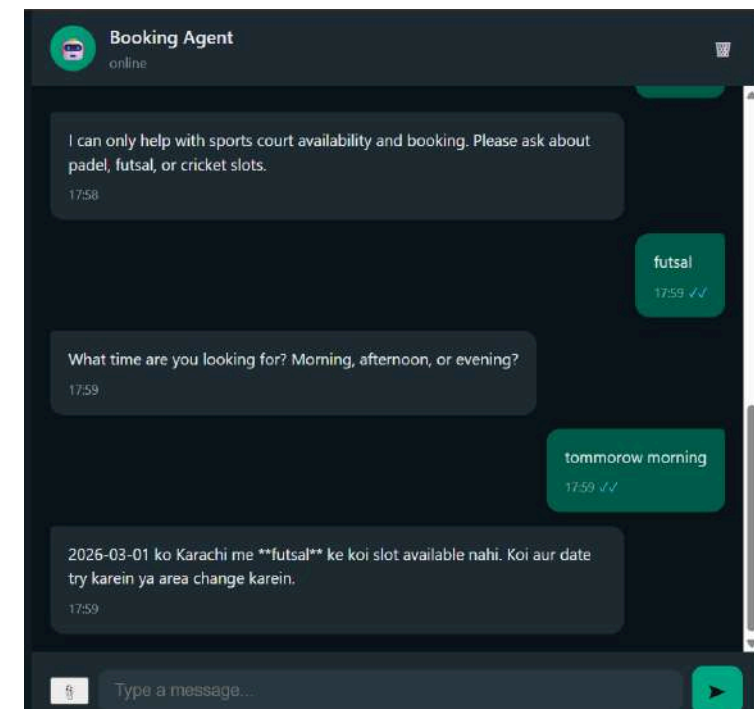
Events Chair,
Habib University Student Government

Employment Experience

Lucky Cement,
SAP Intern
(June – August 2025)

Final Year Project

My Final Year Project is BookForMe, a platform designed to make booking sports courts easier. In Karachi, many sports facilities still rely on phone calls or WhatsApp messages to manage bookings, which can be confusing and unorganized. BookForMe solves this by bringing different venues and available time slots into one system where users can quickly search and book courts. The platform also includes a WhatsApp-based assistant that lets people find and reserve courts through simple chat messages. The goal of the project is to make the booking process easier for players while helping sports venues manage their reservations more efficiently.





JIBRAN SHEIKH

Hilton Pharma Merit Scholar

BS Computer Science
Design

 jibranshiekh04@gmail.com

 +923313027668  LinkedIn

"I'm passionate about building impactful software and leveraging AI to automate workflows. My journey spans full-stack development apps and AI systems driven by a vision to create smarter, efficient digital solutions."

Core Skills

- Kotlin
- Node
- Python
- React
- Typescript

Core Competencies

Strategic Thinking

Leadership & Co-Curricular Activities

Member,
Multiverse Club

Member,
Habib University Student Government

Member,
Sports & Recreational Club

Employment Experience

Trainee Software Engineer,
Folio3
(November 2025 – May 2026)

Researcher,
Habib University
(May 2025 – April 2026)

Software Developer Intern,
Durbeen
(May – September 2024)

Game Programmer Intern,
Mindstorm Studios
(June – August 2023)

Final Year Project

SafeKarachi

SafeKarachi is a mobile-first platform designed to address the daily safety and mobility challenges faced by Karachi's residents. Karachi, despite being Pakistan's economic hub, consistently ranks among the world's least livable cities due to rampant street crime, traffic congestion, flooding, and poor infrastructure. Existing navigation apps only optimize for time and distance, leaving commuters vulnerable to unsafe routes. SafeKarachi bridges this gap by recommending routes that prioritize both safety and efficiency, factoring in real-time crime, road conditions, and civic disruptions. Beyond navigation, it fosters community engagement by allowing residents to report and view nearby incidents through area-based groups. This creates a collaborative, informed environment where citizens can make confident, safer travel decisions every day.

Publications, Creative Projects & Global Experiences

Research Paper – Research Paper on Urban Expansion in Karachi in May 2026





JOTESH KUMAR

BS Computer Science

 joteshkumar87@gmail.com

 +923112619459  LinkedIn

"CS graduate driven by AI-powered products, full-stack engineering, marketing, and business development. I build things that work, from creating apps to pop-up festivals, and intend to keep doing both."

Core Skills

- C++
- Figma
- Marketing
- Node.js/React
- Python

Core Competencies

Acts with Ownership; Adaptability;
Collaborates Openly; Planning; Problem
Solving; Takes Initiative

Leadership & Co-Curricular Activities

Deputy Socials Director HUMUN

Sponsorship Lead Member HUCON

Computer Science And Engineering Club

Member,
Feminist Collective

Member,
Young Leaders Club

Employment Experience

Content Creator,
Lime Studio
(September 2025 – November 2026)

Marketing Executive & Content Creator,
HR Consultants
(February 2025 – April 2026)

Manager & Partner,
Local Popup Karachi
(December 2024 – April 2026)

Business Development and Marketing
Intern,
Techexons
(June – August 2024)

Final Year Project

Ilm Dost: An AI-Powered Socratic Math Tutoring System for Primary School Students

Ilm Dost is a full-stack web application designed to improve math comprehension among underprivileged Grade 5 students aligned with the Sindh Board curriculum. The system pairs a React/TypeScript frontend with a Node.js/Express backend and PostgreSQL database, deploying a fine-tuned Phi-4 language model via LoRA adapters to deliver Socratic tutoring, guiding students through reasoning rather than providing direct answers. The platform supports student and guardian roles, OTP-based login, quizzes across seven curriculum chapters, voice input via the Web Speech API, and engagement mechanics including streaks and badges. A curated evaluation dataset benchmarks the fine-tuned model against the base model using dual rubrics assessing pedagogical quality and mathematical accuracy. The project aims to address Pakistan's learning crisis through accessible, conversational AI tutoring.

Publications, Creative Projects & Global Experiences

Exchange Program – Got into UC Berkely for
Habib University's Learn Abroad Program





KHAWAR M. AWAN

BS Computer Science

✉ khawarsays768@gmail.com

☎ +923101007551 🔗 LinkedIn

*"Computer Science student at Habib University
interested in AI and software development.
Building an automated recruitment platform
and leading AIESEC in Karachi. Aspiring to create
technology solutions that improve hiring."*

Core Skills

- C++
- Linux
- Python
- SQL
- Selenium Webdriver

Core Competencies

Acts with Ownership; Adaptability;
Collaborates Openly; Effective Presentation
Skills; Encourages Innovation; Planning; Takes
Initiative

Leadership & Co-Curricular Activities

Head Of Operations,
Moseequi & Raqs

Employment Experience

President,
AIESEC in Karachi
(February 2026 – January 2027)

Director Outgoing Global Talent
Exchange,
AIESEC in Karachi
(August 2023 – January 2024)

Customer Support Manager Outgoing
Global Talent Exchange,
AIESEC in Karachi
(February – July 2023)

HR Intern,
Gray Mackenzie Restaurants
International Ltd (KFC)
(May – August 2024)

Final Year Project

NeuroHire

NeuroHire is an AI-powered recruitment platform designed to automate early-stage candidate screening for high-volume hiring. The system integrates CV parsing and bilingual video interview analysis in Urdu and English to evaluate candidates efficiently. Using natural language processing and automated scoring, the platform ranks applicants based on predefined job criteria and generates structured evaluations. A key focus of the project is supporting the Pakistani hiring market, especially for low-skill or entry-level roles, by allowing candidates to respond in Urdu, a feature rarely supported by existing recruitment platforms. NeuroHire is particularly aimed at organizations that process large numbers of applicants, enabling faster and more objective shortlisting through intelligent automation.





KULSOOM ASIM

BS Computer Science
Design

 kulsoom.asim@gmail.com
 +923238229619  LinkedIn

"Through my projects, I did user testing, test automation, data analysis using SQL and Python, and understood user journeys. I aim to pursue SQA or Data Analytics, working towards Product Management."

Core Skills

- Css
- C++
- Figma
- Git
- Html
- Illustrator
- Javascript
- Photoshop
- Postman
- Procreate
- Python
- React
- Selenium
- Sql

Core Competencies

Agility; Strategic Thinking

Leadership & Co-Curricular Activities

Student Life Ambassador

Graphic Designer,
Natural Science Club

Graphic Designer,
Serve Club

Employment Experience

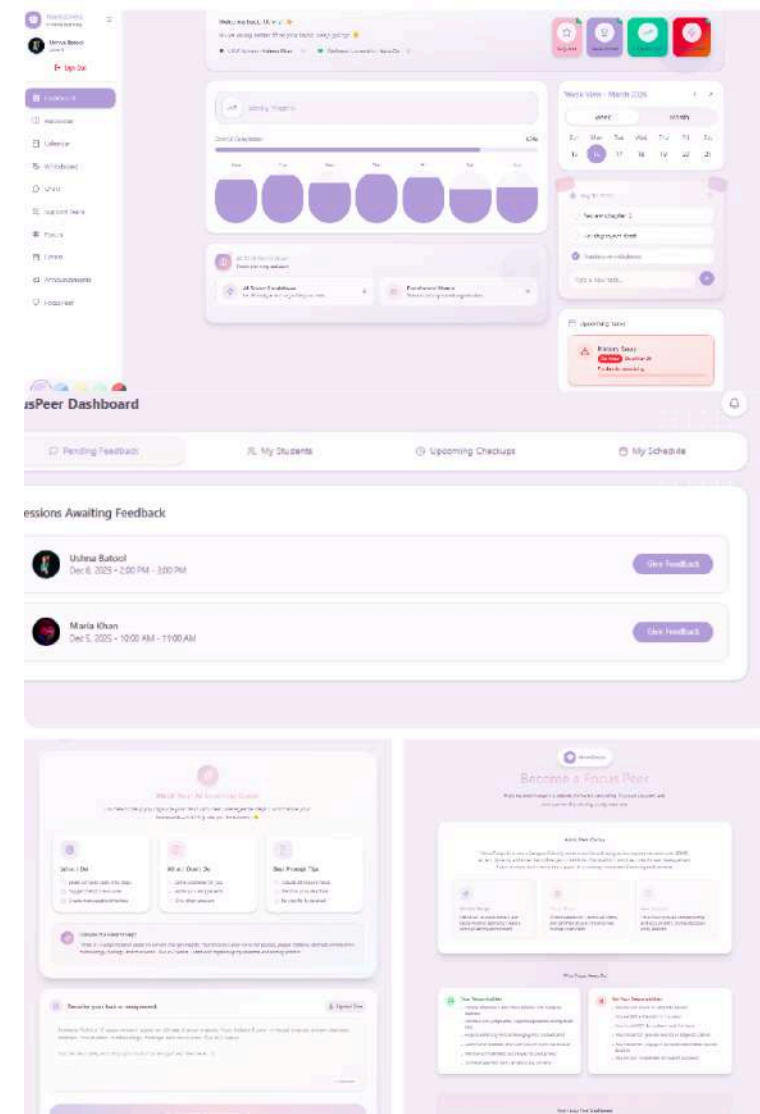
Digital Product Developer & Market
Researcher,
Al-Baraka Bank
(June – August 2025)

Mobile Application Developer,
Durbeen
(June – August 2023)

Final Year Project

NeuroZaaviya

University life presents unique challenges for students with ADHD and dyslexia, from navigating complex systems to staying organized and accessing support. This project aimed to address these barriers by designing a neurodivergent-friendly Learning Management System centered around the needs of its users. Through research involving students, professors, academic advisors, and support staff, a platform was developed that is intuitive, accessible, and genuinely inclusive. The system brings all relevant campus offices together in one space, ensuring students are never left to navigate university life alone. A key feature is the Focus Peer model, which pairs neurodivergent students with accountability mentors. Additionally, an AI-powered task breakdown tool helps students manage schedules and divide tasks, ensuring consistent support.





MAARIJ A. IMAM

BS Computer Science

 maarij.imam@gmail.com

 +923202021071  LinkedIn

"Interested in combining Computer Vision and Graphics to create intelligent rendering systems and interactive digital experiences, I seek roles focused on developing these technologies and advancing visual computing experiences."

Core Skills

- C#
- Machine Learning
- OpenCV
- Pillow
- Python
- Scikit/TensorFlow
- Shaders
- Unity
- WebGL

Core Competencies

Agility

Academic Awards

High Academic Leap Scholarship 2023

Employment Experience

Intern,
Jubilee Life Insurance
(July – August 2025)

Final Year Project

Adaptive AI for Interactive Environments

Built in Unity using ML-Agents, this project replaces traditional state-machine logic with a trained neural network to create a dynamic adversarial entity. The goal is to engineer an intelligent system that continuously analyzes user behavior to dynamically adjust its strategies and difficulty in real time. The research demonstrates the viability of applying reinforcement learning within real-time games or other interactive environments and to practically evaluate both the benefits and the technical limitations of this approach.





MAHNOOR AMINULLAH

BS Computer Science

 mahnoor.3773@gmail.com

 +923000201887  LinkedIn

"I am interested in the Data Science field within Computer Science and am also open to exploring opportunities in related fields beyond this."

Core Skills

- Canva
- MS Excel
- Python

Employment Experience

Engro Fertiliser,
Finance Intern
(May – June 2024)

Indus Hospital,
Erd Department
(June 2025)

Final Year Project

MediaScope

Digitizing the Frere Hall archives of Dawn newspapers to make Pakistan's rich history more accessible to historians, researchers, and students through advanced analytical tools.





MAHTUKH YOUSUF

Hilton Pharma Excellence Scholar
BS Computer Science

✉ mahrukhyousuf514@gmail.com

☎ +923313842494  LinkedIn

"I'm passionate about building technology that solves real problems, especially through AI, computer vision, and app development. I enjoy combining technical skills with design to create meaningful, user-focused digital solutions."

Core Skills

- Mobile App Development

Core Competencies

Adaptability; Collaborates Openly; Planning; Takes Initiative

Leadership & Co-Curricular Activities

General Secretary,
Entrepreneurship Club

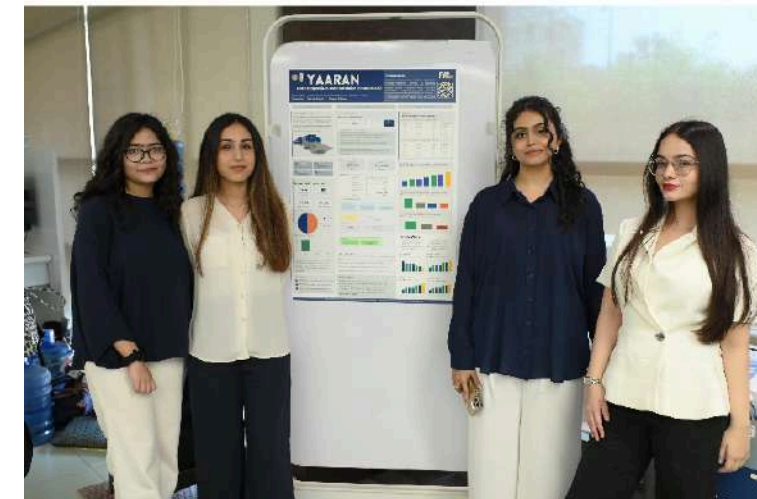
Employment Experience

Intern,
Cubepeaks
(June – July 2024)

Final Year Project

Yaaran

Our project focuses on developing a Burushaski translation app to support the preservation and accessibility of the Burushaski language, which is spoken by a limited population and lacks digital resources. The aim of the project is to collect linguistic data and build a translation system that can convert Burushaski into more widely used languages, making communication and learning easier.





MAIRA KHAN

Nargis & Shahid Soorty Scholarship

BS Computer Science

✉ mairakhann62@gmail.com

☎ +923352108491  LinkedIn

"I build agentic AI systems that turn complex business decisions into intelligent, automated actions. My path: embedding AI at the core of FMCG marketing strategy, at scale."

Core Skills

- AI Agents & GPT APIs
- Docker & Kubernetes
- Python
- React.js & Next.js
- SQL & MongoDB

Core Competencies

Drive for Results; Effective Presentation Skills;
Problem Solving; Strategic Thinking

Leadership & Co-Curricular Activities

Founder And Captain- Rowing Team,
Sports & Recreational Club

Founder And Captain- Powerlifting
Team,
Sports & Recreational Club

Employment Experience

Analytics & Insights Intern,
Procter & Gamble
(June – September 2025)

Final Year Project

Almari

Almari is Pakistan's first integrated digital wardrobe and virtual try-on system, built specifically for local fashion. Women in Pakistan spend up to 40 minutes daily choosing outfits, while e-commerce platforms offer no reliable fit visualization—driving decision fatigue and high return rates. Almari addresses this through three core modules: a digital wardrobe for organizing owned clothing, an AI-powered recommendation engine that factors in weather, occasion, and cultural context, and a 2D virtual try-on system using computer vision and AR. The project also establishes the first AR/CV-ready dataset for Pakistani traditional garments. The result is a culturally aware, mobile-first styling companion that reduces decision fatigue, improves online shopping confidence, and promotes sustainable wardrobe use.





MANAL HASAN

Viena and Zakir Ibrahim HU TOPS Scholar

BS Computer Science

✉ manalhasan1010@gmail.com

☎ +923165475162  LinkedIn

"My will to learn keeps me motivated. That's why I'm drawn to AI or Software Engineering fields where innovation never stops and there's always an opportunity to build and learn."

Core Skills

- Computer Vision
- Cpp
- Deep Learning
- Python
- Sql

Core Competencies

Encourages Innovation; Problem Solving;
Takes Initiative

Academic Awards

Dean's List 2024, 2025

President's List 2025

Leadership & Co-Curricular Activities

Vice President,
Wise (Women in Science and Engineering)

Vice Chair - Communications Cabinet,
Habib University Student Government

Member - Communications Cabinet,
Habib University Student Government

Employment Experience

Teaching Assistant - Artificial Intelligence,
Habib University
(September – December 2025)

Software Engineering Intern,
Motive
(June – September 2025)

Teaching Assistant - Computer Architecture,
Habib University
(January – May 2025)

Teaching Assistant - Discrete Mathematics,
Habib University
(January – May 2024)

Final Year Project

Habib University Digital Twin

My Final Year Project focuses on a Digital Twin system for a university laboratory to improve campus management and operational efficiency. Our project aims to address this by creating a proof-of-concept digital twin that provides a live virtual representation of the lab environment. The system integrates three key components: occupancy detection, emergency response support, and an energy management dashboard. By combining these functions into a single platform, the project helps administrators visualize occupancy, respond faster during emergencies, and optimize energy usage. Overall, the goal is to demonstrate how smart, data-driven systems can make campus spaces safer, more efficient, and easier to manage.

Publications, Creative Projects & Global Experiences

Research Paper – Research Paper titled ML-Driven Distribution Network Aggregation Considering Load and Inverter-Based Resources, presented in INMIC 2024

Research Paper – Research Paper for SEM-EVAL 2026 TASK 9: Multilingual, Multicultural, and Multievent Online Polarization





MANNAN M. RANGOONIA

BS Computer Science
Mathematics

✉ mannan.mohammed14@gmail.com

☎ +9203338582666  LinkedIn

"I began with machine learning projects, which sparked my interest in AI and led me to explore large language models, the field I am most interested in pursuing further professionally."

Core Skills

- C++
- Data Analytics & Machine Learning
- Problem Solving & Design
- Python
- Web Development and UI/UX Design

Academic Awards

High Achievement Scholarship 2023,
2024, 2025, 2026

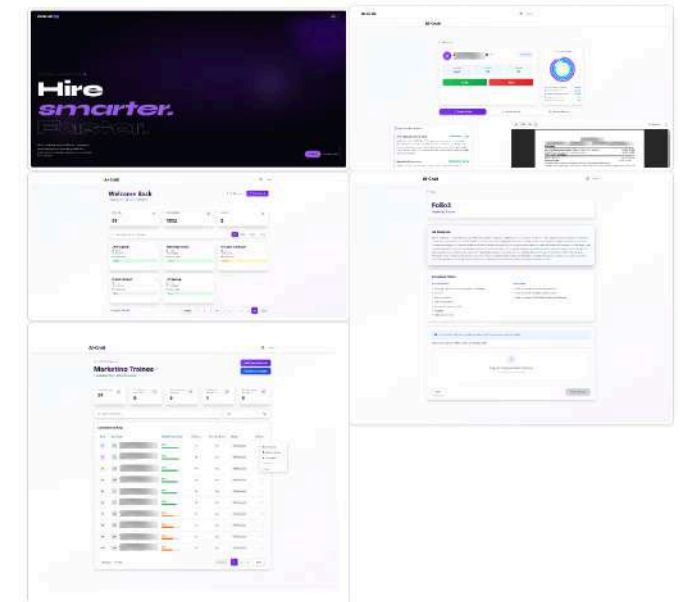
Employment Experience

Software Engineering Trainee,
Folio3
(September 2025 – May 2026)

Final Year Project

AlCruit

AlCruit is an intelligent recruitment management system designed to automate and optimize candidate screening and interviewing. The platform can parse and analyze hundreds of resumes within minutes, automatically shortlisting candidates based on predefined criteria. It then conducts AI-powered interviews with selected applicants and integrates real-time proctoring to ensure fairness and authenticity during evaluations. During development, our team conducted benchmarking across multiple large language models to evaluate their performance in resume analysis and interview question generation. We constructed an evaluation dataset using assessments from the HR department at Folio3 as the ground truth. Based on these results, we selected the most effective models and applied prompt engineering techniques to build an efficient system that delivers strong performance while minimizing operational costs.





MARIA ADNAN

BS Computer Science
Comparative Literature

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☎ +923325676616  LinkedIn

"Final-year Computer Science student exploring digital humanities, 3D reconstruction, and cultural storytelling. Editor and researcher passionate about merging technology, literature, and immersive media to create meaningful, interdisciplinary, socially impactful work."

Core Skills

- Python

Core Competencies

Collaborates Openly; Drive for Results

Leadership & Co-Curricular Activities

Editor in Chief – Tezhib

Lead Editor – Arzu

Marketing Lead,
Araish – E – Khayal

Employment Experience

Teaching Assistant – Jehan E Urdu,
Habib University
(January – April 2025)

Teaching Assistant – Kaavish,
Habib University
(January – April 2025)

Final Year Project

EthnoVerse: Immersive Cultural Preservation through 3D Gaussian Splatting

EthnoVerse is a digital humanities project that leverages 3D Gaussian Splatting to create immersive, high-fidelity reconstructions of culturally significant spaces and artifacts. The project aims to preserve and reinterpret South Asian heritage by transforming physical environments into interactive digital experiences accessible through web-based platforms. By combining computer graphics, photogrammetry, and narrative design, EthnoVerse enables users to engage with cultural sites beyond static documentation. The research explores the efficiency and realism of 3DGS compared to traditional reconstruction methods, highlighting its potential for scalable heritage preservation. Ultimately, the project contributes to bridging technology and cultural storytelling, offering a novel approach to archiving, education, and public engagement with endangered or underrepresented cultural narratives in accessible and meaningful ways.

Publications, Creative Projects & Global Experiences

Documentary – Documentary on Tribal Tattoo Traditions of Indigenous Sindhi Hindu women





MARIUM ZEESHAN

Systems Limited HU TOPS Scholar
BS Computer Science

 mariumzeeshan.mz@gmail.com

 +923322050522  LinkedIn

"I am interested in Data Science and Machine Learning and motivated to build intelligent systems that analyze data, generate insights, and create scalable solutions for real-world problems."

Core Skills

- JavaScript (React, Node.js)
- Python (Machine Learning & Data Analysis)

Employment Experience

Information Technology Intern,
Al Baraka Bank
(June 2025 – July 2026)

Product Development Intern,
Optimizers Lab (Pvt.) Ltd.
(February – May 2026)

Data Science Intern,
10Pearls
(May – August 2025)

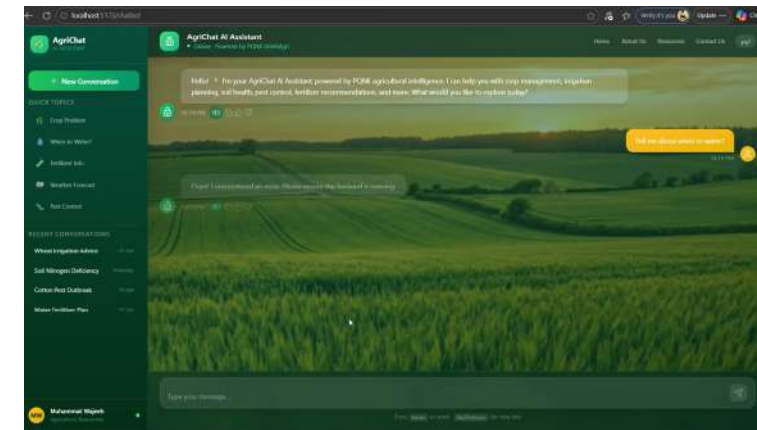
Final Year Project

Multilingual Multimodal Chatbot for Agricultural Knowledge Retrieval (PQNK)

In collaboration with Pakistan Agriculture Research (PAR), my final year project focuses on developing a RAG-based multilingual chatbot. The system leverages 4TB of multimodal data, including text, images, and videos, to provide domain-specific knowledge retrieval for agricultural research and decision-making. The project addresses challenges such as noisy videos and overlapping human speech, using human voice activity detection (DeepFilter) to clean and preprocess audio data. The aim is to enable researchers and practitioners to access precise, actionable information quickly, improving efficiency in agricultural research and facilitating informed decision-making. This project highlights my skills in AI, machine learning, multimodal systems, and data processing, while delivering a practical solution with real-world impacts.

Publications, Creative Projects & Global Experiences

Publication – Waiting for acceptance at ACL Anthology





MEESUM ABBAS

BS Computer Science

✉ meesum5914@gmail.com

☎ +923242112558 🔗 LinkedIn

"Driven by deep learning and real-time systems, my primary focus is engineering high-impact AI solutions. Ultimately, I aim to bridge complex technical architecture with user needs through product management."

Core Skills

- C++ & Algorithm Optimization
- Flutter, Dart & Firebase
- Machine Learning & NLP (PyTorch, Transformers, LLMs)
- Microservices & Threat Modeling
- OpenCV

Core Competencies

Agility; Collaborates Openly; Drive for Results; Strategic Thinking

Academic Awards

Dean's List 2023, 2024, 2025

President's List 2023, 2024

Leadership & Co-Curricular Activities

General Secretary,
Araish - E - Khayal

2nd Position Faculty Vs Students,
Brain.Hack() - CSEC (Computer Science
and Engineering Club), 2025

Volunteer At Nasa Space App Challenge,
Natural Science Club, 2025

Employment Experience

Intern,
Motive
(June 2025 - March 2026)

Teaching Assistant,
Habib University
(August - December 2025)

Teaching Assistant,
Habib University
(January - April 2025)

Final Year Project

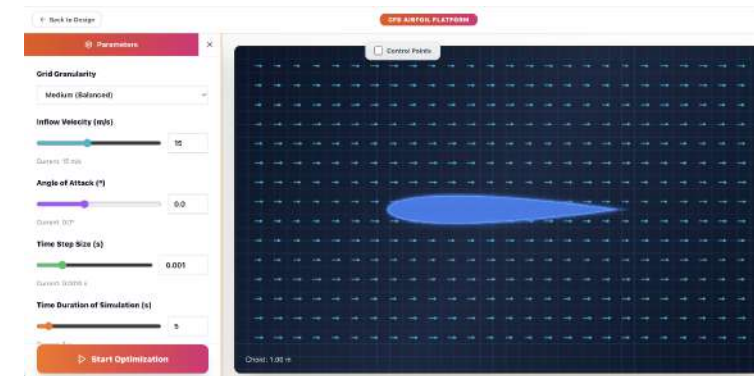
Turbodiff: Differentiable Fluid Dynamics Simulator for Airfoil Shape Optimization

In this project, we engineered a custom Computational Fluid Dynamics (CFD) simulator with a novel shape optimization pipeline leveraging differentiable fluid dynamics to maximize airfoil efficiency. Traditionally, aerodynamic optimization requires computationally expensive iterative testing. Turbodiff solves this by applying deep learning-inspired back-propagation directly through the fluid simulation to perform gradient-based optimization of the airfoil geometry. The core simulator is built using JAX for fluid dynamics and incorporates Reynolds-Averaged Navier-Stokes (RANS) equations to efficiently model complex turbulent flows. Additionally, a secure web application enables users to simulate and optimize airfoils over the web and store/retrieve simulation outputs. Primarily, we aimed to provide an efficient, AI-integrated computational approach to aerodynamic design, allowing rapid optimization of airfoils for specific local atmospheric conditions.

Publications, Creative Projects & Global Experiences

Research Paper - Research paper on "Food Hazard Detection (SemEval Task-9)" published in the Association for Computational Linguistics (ACL) Anthology in 2025.

Research Paper - Research paper on "Early Detection of Depression (eRisk-2025 Task-2)" published in the Conference and Labs of the Evaluation Forum (CLEF) CEUR Workshop Proceedings in 2025.



Competition – International competition participation at the International Collegiate Programming Contest (ICPC) Asia West Finals for Competitive Programming – Ranked 2nd in Pakistan in Round 2

Competition – International competition participation at the International Collegiate Programming Contest (ICPC) Asia West Finals for Competitive Programming – Ranked Top in Pakistan in Round 3



M. FARZAM GHOURI

BS Computer Science

✉ farzam.8ballpool@gmail.com

☎ +923008287031  LinkedIn

"Computer Science student passionate about software engineering, AI engineering, game development, and front-end and back-end development, eager to build innovative, practical, and impactful digital solutions."

Core Skills

- C#
- C++
- Figma
- Flutter
- Python
- React

Employment Experience

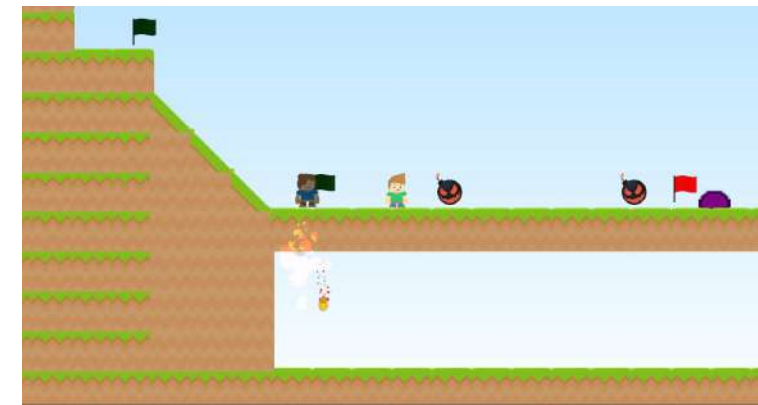
Intern,
Mindstorm Studios
(June 2024 – August 2026)

Intern,
Systems Limited
(June – July 2025)

Final Year Project

KindQuest – Empathy Game for people with Down Syndrome

My Final Year Project is a 2D empathy-based game developed in Unity and C# to create awareness and understanding of individuals with Down syndrome. The project aims to provide an interactive experience where players engage with a character representing a person with Down syndrome and complete tasks that reflect emotional and motor challenges. Its purpose is to promote empathy, inclusivity, and social awareness through game-based learning. The key benefit of the project is that it combines education and entertainment to encourage more compassionate attitudes while also showing how games can be used for meaningful social impact.





MOIZ ZULFIQAR

Recipient of Hilton Pharma Grant

BS Computer Science

✉ moizulfiqar@gmail.com

☎ +923339200711  LinkedIn

"To explore the business side of technology. As I begin my professional journey, I aim to develop an understanding of how technology products are managed, scaled, and brought to market."

Core Skills

- Backend
- Frontend
- Python

Leadership & Co-Curricular Activities

Invent For The Planet (IFTP) 2025 – Participant

General Secretary,
Sports & Recreational Club

Employment Experience

Autonomous Systems Researcher,
Toyota
(June – August 2025)

Software Engineer,
Karachi Vocational Training Center
(January – December 2025)

It Intern,
Lucky Cement
(May – June 2024)

Final Year Project

Retail Store Shelf Monitoring System

Retail stores currently rely on workers to manually check and replenish shelves, which is time-consuming, labor-intensive, and can lead to stockouts that hurt sales. Solution: A computer vision-based system that automatically monitors product occupancy on store shelves in real time and sends alerts to staff when items need restocking.





MUHAMMAD AHMAD H. HANIF

BS Computer Science

 ahmadhanif139@gmail.com

 +923336753188  LinkedIn

"I'm passionate about AI automation, agentic AI systems, and corporate AI training. I aim to build practical AI solutions that help businesses automate workflows and adopt AI effectively."

Core Skills

- Augmented Generation Pipelines
- Data Science
- Machine Learning
- Python
- Retrieval
- Training

Core Competencies

Agility; Strategic Thinking

Academic Awards

Dean's List 2025

Leadership & Co-Curricular Activities

Vice Chair Events Cabinet,
Habib University Student Government

HUCON Logistics Team Member

President – HU Chapter Of Young
PeaceAnd Development Corps

Member,
Entrepreneurship Club

Employment Experience

Intern,
Lucky Cement
(June – July 2025)

Intern – Backend Development,
Aksiq
(May – July 2024)

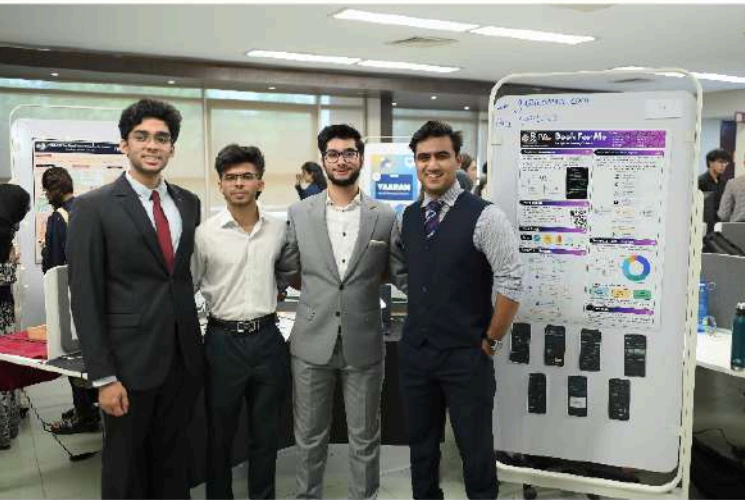
Final Year Project

BookForMe is an AI-powered sports venue booking platform that connects customers and vendors through a React Native app (with in-app vendor management) and a WhatsApp AI receptionist, all backed by a single Firestore database with zero double bookings. The main contribution is an agentic AI booking assistant built with LangGraph, which runs multi-turn conversations as a stateful graph with nodes for intent classification, entity extraction, availability checks, and booking execution. The agent supports bilingual input (English and Roman Urdu). A second AI component performs payment OCR using a vision model to extract and validate amounts from payment screenshots. The platform cuts manual coordination for vendors and shows how LangGraph-based agentic AI can address real-world service marketplace flows.

Publications,Creative Projects & Global Experiences

Research Paper – Research Paper on
Advertisement Integration in Retrieval-
Augmented Generation Systems

Conference Presentation – Published &
Presented at CLEF 2025 at UNED, Madrid in
September 2025





MUHAMMAD ANAS

Hilton Pharma HU TOPS Scholar

BS Computer Science

✉ muhammad.anas02@hotmail.com

☎ +923347371832  LinkedIn

"I aspire to become an Ethical AI Consultant, giving back to the society that shaped my journey and creating a positive global impact through responsible and innovative technology."

Core Skills

- Cloud-Native & DevOps Engineering
- Data Science and Machine Learning
- Ethical & Responsible AI System Design
- Full-Stack AI Product Development (Next.js, FastAPI and Langchain)
- LLM Systems Engineering

Leadership & Co-Curricular Activities

Treasurer,
Brain.hack() – CSEC (Computer Science and Engineering Club)

Employment Experience

Associate Software Engineer,
TPS Worldwide
(December 2025 – June 2026)

Teaching Assistant – Generative AI,
Habib University
(January – May 2026)

Associate Backend and AI Engineer,
Vectorr.io
(October 2025 – January 2026)

Software/AI Engineering Intern,
Dawlance
(July – August 2025)

Final Year Project

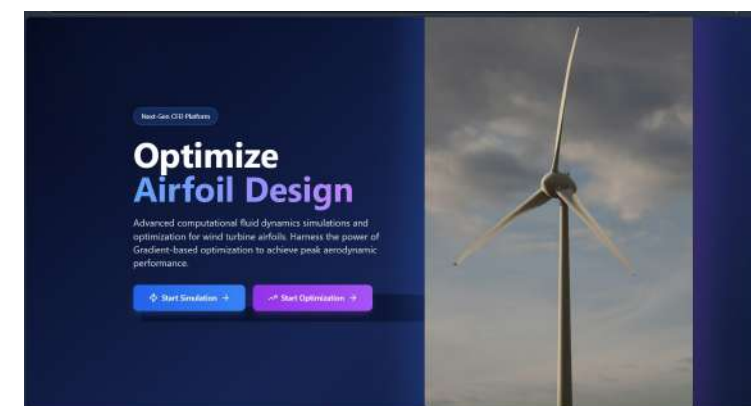
TurboDiff – A Differentiable Wind Turbine Blade Optimization Simulator

As the global shift accelerates toward renewable energy, optimizing wind turbine efficiency is critical. My project aimed to replace slow, trial-and-error blade design by bridging theoretical physics and machine learning. The simulator is a differentiable 2D physics engine built using Python, JAX, and Blade Element Momentum theory. Utilizing XLA JIT compilation for very fast computation, this engine enables gradient-based optimization to automatically calculate the most aerodynamic and power-efficient blade shapes. To make this actionable, it has a Next.js web interface streaming real-time telemetry and dynamic pressure visualizations via WebSockets from a FastAPI backend. Deploying the system as Docker-containerized Azure microservices with a full CI/CD pipeline, I successfully transformed complex AI concepts into scalable, production-ready enterprise software.

Publications, Creative Projects & Global Experiences

Publication – CLEF 2025 Working Notes (CEUR-WS Proceeding), Europe

Conference Presentation – International Bhurban Conference on Applied Sciences & Technology (IBCAST) 2025





M. ANSAB CHAUDHARY

BS Computer Science

✉ ansabchaudhary8@gmail.com

☎ +923008290655  LinkedIn

"I am interested in Machine Learning and AI and am motivated to build AI-driven products by leveraging my research and software engineering experience."

Core Skills

- Full Stack Development
- LLM
- Machine Learning/NLP
- Python
- SQL

Core Competencies

Adaptability; Agility; Effective Presentation Skills

Leadership & Co-Curricular Activities

Social Media Manager,
Computer Science and Engineering Club

Employment Experience

Data Science Intern,
10Pearls
(December 2025 – February 2026)

AI Intern,
Jaffer Business Systems
(May – July 2025)

Machine Learning Intern,
Pakistan Agriculture Research
(June – August 2024)

Campus Brand Ambassador,
Jubilee Life Insurance
(March – July 2024)

Final Year Project

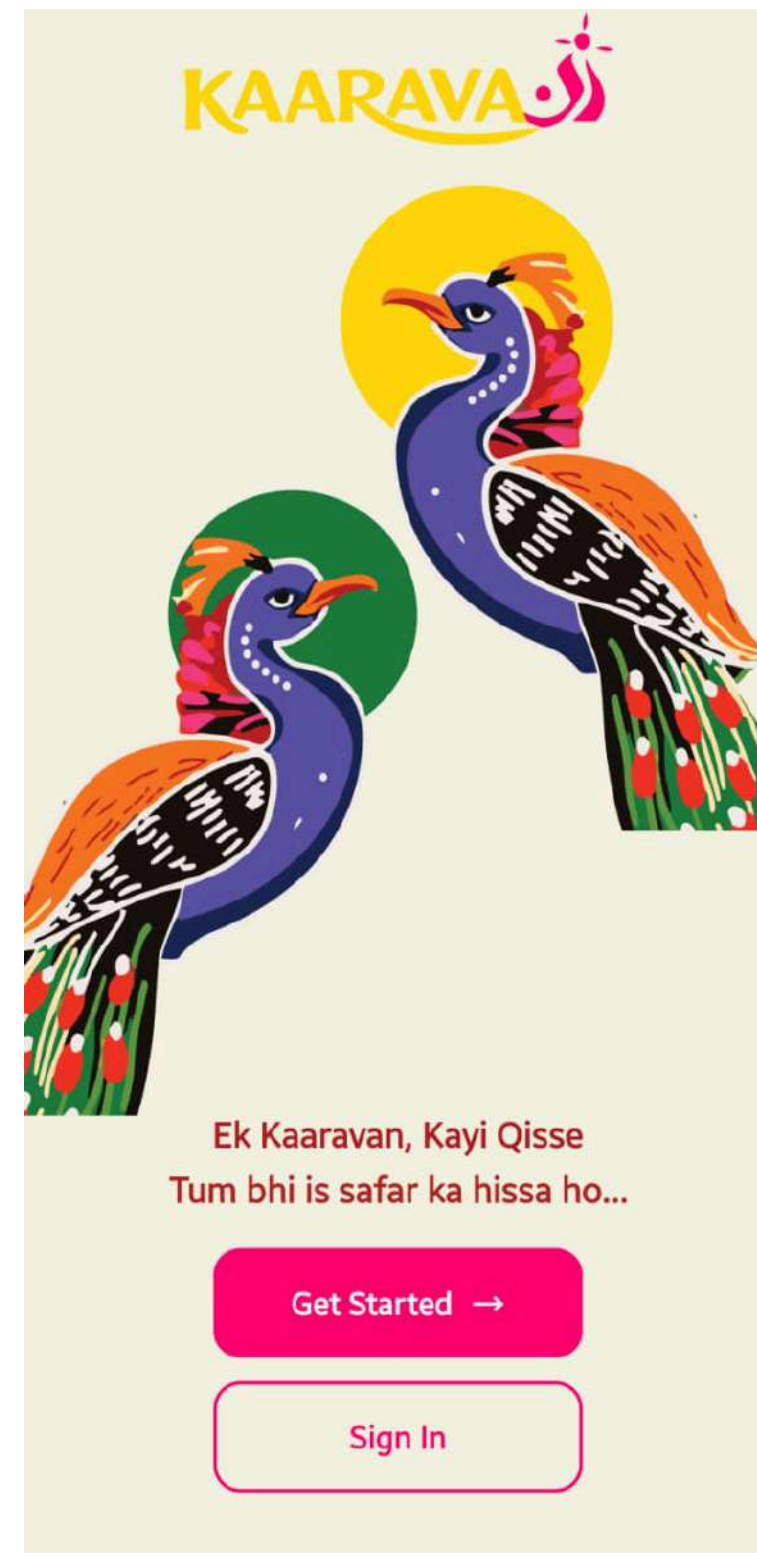
Kaarvan

Kaarvan is a centralized social media platform designed to unify the fragmented landscape of charitable and social work. By bridging the gap between NGOs, volunteers, donors, and activists, the app provides a consolidated ecosystem for collaboration on social causes. Built with a robust tech stack—React Native/Expo for the frontend, Node.js/Express and Prisma (PostgreSQL) for the backend, and Socket.io for real-time engagement—Kaarvan enables users to join interest-based communities, sign up for volunteer opportunities, and contribute to fundraisers via integrated in-app donations.

Publications, Creative Projects & Global Experiences

Research Paper – "Legal Judgement Prediction using Deep Learning Techniques on Pakistani Legal Data" published in IBCAST Conference in August 2025

Research Paper – "Unified RAG Pipeline for Native Ad Generation and Detection" published in Touche CLEF Conference in September 2025





M. HASAN NIZAMI

BS Computer Science

 23hsn4@gmail.com

 +923304340001  LinkedIn

"One of my interests is system design, and I want to further explore building scalable systems. I am also interested in LLMs and other machine learning-based products."

Core Competencies

Adaptability; Agility; Effective Presentation Skills

Employment Experience

Intern,
Karachi Vocational Training Center KVTC
(May – August 2025)

Web Developer,
Institute of Social Science and
Development ISSAD
(May – August 2025)

Junior Assistant Researcher – Summer
Research Internship,
Habib University
(May – September 2024)



M. HASSAAN TARIQ

BS Computer Science

✉ mhassaantariq03@gmail.com

☎ +923368936884  LinkedIn

*"I am interested in various fields. Some include:
QA, Mobile Development, Web Development,
Game Development, and AI/ML Engineering."*

Core Skills

- Breaking Systems
- Development
- Problem Solving
- Unity
- Python

Core Competencies

Adaptability; Takes Initiative

Leadership & Co-Curricular Activities

Vice President – Chessdicts Chess Club

Captain – Volleyball Team,
Sports & Recreational Club

Employment Experience

SQA Intern,
10Pearls
(September – November 2025)

MIS/AI Intern,
Pharmevo
(June – August 2025)

Game Development Intern,
M-Labs Studio
(June – August 2024)

Final Year Project

Predictive Modeling for Fault Occurrence Time and Recovery Time in Transformers

Working with K-Electric to help them
understand and model transformer-related
data for the purpose of certain predictions.
NDA signed; hence, cannot share more
information at this time.





MUHAMMAD HASSAN

BS Computer Science

hassaniqball9343@gmail.com

+923240464504 LinkedIn

"I build production-grade web applications and AI systems. Having shipped 50+ projects globally and led engineering at an a16z-backed startup, I seek roles with full technical ownership."

Core Skills

- AI Integration
- Next.js/React
- Node.js
- PostgreSQL / Supabase
- Typescript

Academic Awards

Dean's List 2023

High Achievement Scholarship 2023, 2024, 2025, 2026

Leadership & Co-Curricular Activities

ICPC (Qualified For Nationals)

Member,
Entrepreneurship Club

Member,
Computer Science And Engineering Club

Employment Experience

Freelancing/Contra,
Fullstack Developer | Ai Developer
(February 2023 – December 2026)

Chronicler Labs,
Frontend Lead | Fullstack Developer
(January 2025 – October 2026)

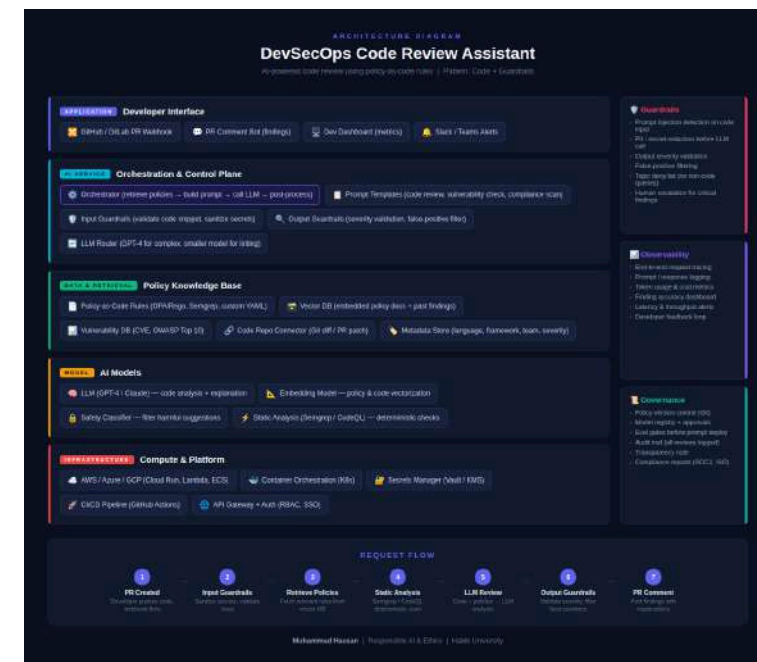
Final Year Project

FMCG Shelf Monitoring

Retail shelf monitoring remains largely manual — brand representatives physically inspect stores while surveillance teams watch camera feeds. Our system automates this using YOLOv8 with a novel business-rules-first approach grounded in consumer psychology research. Unlike existing solutions that simply count products, we define "detected" through three criteria: 70% face visibility, two-row reachability, and correct orientation — measuring purchasability, not just presence. Validated through field research at Springs Supermarket and approved by Carrefour and Al-Fatah via our industry partner Multinet, the system achieves 97.2% mAP and generates automated severity-based restocking alerts. Built as a full-stack application with Next.js, FastAPI, and Supabase, it reduces response time from hours to minutes, delivering real-time shelf compliance data previously unavailable to FMCG brands.

Publications,Creative Projects & Global Experiences

Award – Runner-up, Invent for the Planet, Marseille, France (240 teams, 25 countries)
Award – Winner Research Project, FIRST Lego League Internationals Europe, Hungary





M. HAYYAN KHAN

Recipient of Hilton Pharma Grant
BS Computer Science

✉ khan.muhammadhayyan03@gmail.com

☎ +923090975155  LinkedIn

"My passion is Data Science and Cybersecurity. I am interested in leveraging my experience in graph, network, data analytics, modeling, and AI, and aim to build secure, predictive systems."

Core Skills

- C++
- Neo4j
- Python
- React

Core Competencies

Adaptability; Takes Initiative

Employment Experience

Data Science Intern,
10Pearls
(April – June 2026)

AI Engineer/Game Developer,
Amanah Ventures
(September 2025 – June 2026)

Software Engineering Intern,
Al Emaan Institute
(May 2025 – June 2026)

Financial Analyst,
Nixor Records
(December 2020 – March 2022)

Final Year Project

Threads of life

Threads of Life is a 2D narrative-driven video game that addresses a gap in modern gaming where moral choices are reduced to simplistic, binary systems. Instead of fixed dialogue options, players respond to ethically complex dilemmas in their own words — via text or voice — and an AI backend (Google's Gemini 2.5 Flash) evaluates their responses across dimensions like empathy, prosocial behavior, and engagement. These evaluations dynamically alter the game's physical environment, unlocking different paths and ultimately one of four distinct endings. The project demonstrates how large language models can power meaningful moral reflection in interactive media, with potential applications in ethics education and psychological research. An example of the additional features is dynamic NPC voice generation.





MUHAMMAD IBAD

Towfiq Chinoy & Family HU TOPS Scholar

BS Computer Science
Mathematics

 ibad29377@gmail.com

 +923052505689  LinkedIn

"I am motivated to develop software and AI systems that drive meaningful social impact in Pakistan, while also pursuing research at the intersection of technology and real-world applications."

Core Skills

- Angular + ASP.NET Core
- C++
- Deep Learning
- Next.js
- Python

Core Competencies

Agility

Academic Awards

Dean's List 2023, 2024, 2025

High Achievement Scholarship 2024

President's List 2024

Leadership & Co-Curricular Activities

Orientation Leader

General Secretary,
Math Club

Deputy Directorate Security,
HUMUN

Registration Team Member,
HUCON

Right and Advocacy Cabinet Member,
Habib University Student Government

Employment Experience

Associate Software Engineer,
Tps Worldwide
(December 2025 – June 2026)

Analysis Intern (Remote),
Liberty City Ventures, USA
(July – August 2025)

Student Researcher –
Tehqiq

Research
Habib University
(June 2024 – May 2026)

Teaching Assistant,
Habib University
(August 2023 – May 2026)

Final Year Project

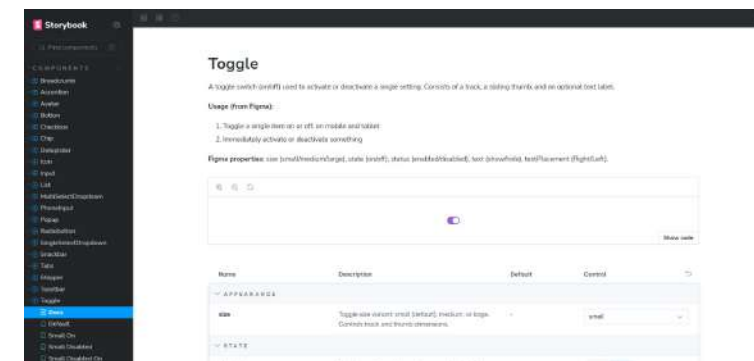
Design to Code with Knoccs

Design to Code with Knoccs is a final-year CS project that addresses the costly disconnect between UI design and software development in SpurSol's CRM platform, Knoccs. The project pursues two parallel goals: first, building an automated pipeline that converts Figma designs into production-ready Angular code using Claude and Figma MCP, eliminating manual design-to-development handoff; second, implementing a Retrieval-Augmented Generation (RAG) knowledge base that lets users query Knoccs documentation intelligently using semantic search and LLM-generated answers. Practical validation comes through two implemented features, Tag Management and Macro Management, generated using the new component library. Expected benefits include significantly reduced development time, greater design-code consistency, fewer hallucinations via grounded retrieval, and a scalable foundation for future AI-driven automation within the platform.

Publications, Creative Projects & Global Experiences

Research Paper – Research Paper on Classifying Pakistan's Diverse Languages published in 4th International Conference on Communication, Computing and Digital Systems in 2025

Research Paper – Research Paper on Evaluating Data Retrieval and Quality in Pakistani High Court Systems published in 7th International Conference on Advancements in Computational Sciences in 2026





M. MANSOOR ALAM

Hilton Pharma Merit Scholar

BS Computer Science

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☎ +923132712536  LinkedIn

"Final-year Computer Science student with hands-on experience in deep learning, computer vision, and full-stack development. IEEE-published researcher interested in building impactful products in applied AI/CV and software engineering."

Core Skills

- API Integration/Security Sandboxing
- C++
- Fine-Tuning & Transfer Learning
- Full-Stack Development (React, Node.js, Express)
- Python AI Model Training

Core Competencies

Effective Presentation Skills

Leadership & Co-Curricular Activities

Events Cabinet Member,
Habib University Student Government

Security Team Lead – Hucon,
Multiverse Club

Orientation Leader

Career Services Ambassador

Career Connect Event Manager

Employment Experience

Cybersecurity Intern,
K-Electric
(June – August 2025)

Final Year Project

ML-Powered Predictive Fault Management in Power Distribution Systems for K-Electric's Power Grid

My FYP, developed in collaboration with K-Electric, aims to build Karachi's first machine learning-based system for predicting power outages before they occur. The system uses historical fault data, weather patterns, and grid load information to train predictive models that identify high-risk areas and time windows for outages. The goal is to enable proactive maintenance, reduce unplanned downtime, and improve reliability for a grid serving 20 million+ people. Key components include a feature store for structured data pipelines, a Random Forest-based classifier and regressor, and smart retraining logic to keep the model up to date. The project directly addresses a critical infrastructure challenge in Karachi.

Publications, Creative Projects & Global Experiences

Research Paper – Research paper on "Automating ROP Diagnosis and Severity with Deep Learning", published at IEEE 22nd International Conference on Smart Communities (HONET 2025).





M. MOAZ SIDDIQUI

Hilton Pharma Excellence Scholar
BS Computer Science

✉ moazsiddiqui123@gmail.com

☎ +923345500885  LinkedIn

"Computer Science student with interests in full-stack development, artificial intelligence, and scalable software systems. I enjoy building real-world applications and aim to pursue a career in software engineering and AI-driven development."

Core Skills

- FastAPI
- Firebase
- Python
- React.js
- TypeScript

Core Competencies

Takes Initiative

Leadership & Co-Curricular Activities

Director Logistics & Liaison,
Groove'26

HUMUN VIII Joint Crisis Cabinet
Committee – Assistant Committee
Director

Meritorious Award Ceremony – Volunteer

Employment Experience

Invigilator,
British Council Pakistan
(April 2025 – June 2026)

Peer Tutor – Scientific Methods (Excel),
Habib University
(February – March 2025)

Software & Systems Intern,
Monks
(June – July 2024)

Final Year Project

CampusEye

Computer vision-driven indoor navigation system for university campus with intelligent pathfinding. Architecture Overview: FastAPI backend with NetworkX for graph operations A* pathfinding algorithm over Neo4j graph database Docker containerization for deployment React + TypeScript interactive frontend Real-time route visualization Tech Stack: FastAPI, Neo4j, React, TypeScript, Docker, A* Algorithm, NetworkX





MUHAMMAD MUSTAFA

BS Computer Science
BioScience

✉ mustafa.tis2017@gmail.com

☎ +923341367314  LinkedIn

"Developer passionate about backend systems, computer vision, and building scalable tools. I leverage management skills to turn technical ideas into real-world solutions."

Core Skills

- AI/ML Model Training
- Computer Vision
- PostgreSQL
- Python
- REST API Development

Core Competencies

Adaptability; Agility; Collaborates Openly;
Planning; Takes Initiative

Academic Awards

High Achievement Scholarship 2022,
2023, 2024, 2025, 2026

Employment Experience

Intern,
Habib Metro Bank
(June – July 2023)

Final Year Project

Almari

Almari is a virtual try-on app built for Pakistani clothing like shalwar kameez and kurtas. It uses computer vision and AI to let users see how garments fit their body shape from a single photo. The goal: help online shoppers avoid returns and give local designers an affordable way to showcase collections digitally. I led backend development and integrated the image-processing models. The project proved that localized AI tools can solve region-specific e-commerce problems. Next steps include partnering with Pakistani brands and improving accuracy for diverse fabrics and lighting conditions common in South Asia.





M. NAASEH SAJID

BS Computer Science
Comparative Literature

✉ naasehsajid@gmail.com

☎ +923343788550 LinkedIn

"I am interested in how technology intersects with the humanities, both through technical innovation and by exploring critical questions surrounding human agency and the societal impact of technology."

Core Skills

- Editing
- Javascript (React, NodeJS, NextJS)
- Manuscript Writing
- Python
- R (for Research)
- Proofreading

Core Competencies

Acts with Ownership; Problem Solving; Takes Initiative

Academic Awards

High Achievement Scholarship 2022, 2023, 2024, 2025, 2026

Leadership & Co-Curricular Activities

Habib Reads – Moderator

Habib Writing Circle – Member And Moderator

Runner Up Digital Logic Design Showcase 2023

Employment Experience

Web Developer,
O-Marketing
(June – July 2025)

Senior Content Writer,
Canvas Digital
(October 2022 – March 2026)

Final Year Project

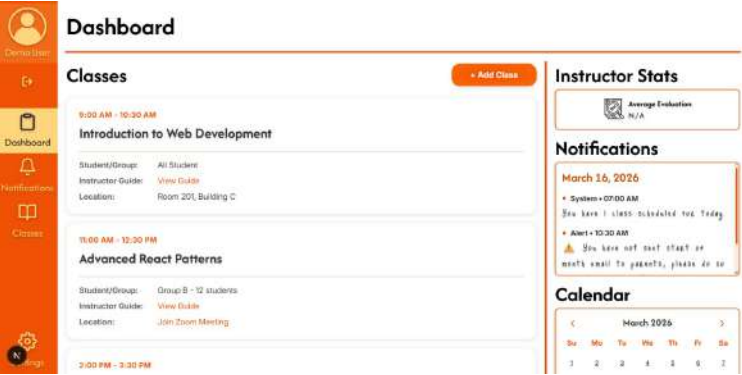
TeachWise in collaboration with CodeSchool Pakistan

A smart Classroom Management System that allows for the evaluation of instructor performance using AI-enabled prosodic analysis of recordings and fidelity to the curriculum.

Publications,Creative Projects & Global Experiences

Research Paper – Origin Story as part of Tehqiq Research Project conducted under Poet Javeria Hasnain

Research Paper – Research Assistant for Fire Incidents Database for Dar Labs under Dr. Qasim Pasta





MUHAMMAD SAAD

BS Computer Science
Mathematics

✉ saad.dev12@gmail.com

☎ +923390150497  LinkedIn

"I enjoy the engineering field and am looking for opportunities in core backend/AI engineering in global companies/startups."

Core Skills

- Go
- Next.js
- Python
- PyTorch
- LangChain

Academic Awards

Dean's List 2023, 2024, 2025

President's List 2023, 2025

Leadership & Co-Curricular Activities

Google Developer Group (GDG) Habib University - Campus Lead + Core Team Member

Treasurer,
Entrepreneurship Club

Academic Affairs Cabinet - CS Batch 2026 Representative,
Habib University Student Government

Employment Experience

Backend Engineer,
Vyro AI (ImagineArt, Chatly)
(December 2025 - June 2026)

Software Development Intern - GSoC,
Google Deepmind
(May - August 2025)

Full Stack AI Intern,
Maven AI

Final Year Project

N/A

TurboDiff is a custom 2D differentiable Computational Fluid Dynamics (CFD) simulator designed to optimize wind turbine airfoils. Built with JAX, the platform replaces traditional trial-and-error solvers with a rapid, gradient-based pipeline that parameterizes airfoil shapes from DAT to CST formats. This fully differentiable architecture allows for highly efficient simulation and optimization of aerodynamic designs, significantly accelerating the engineering process and improving the overall efficiency of wind energy systems.

Publications, Creative Projects & Global Experiences

Award - ICPC Asia West Finalist - Top team from Pakistan

Hackathon - Winner Google DeepMind Nano-Banana Hackathon - \$5k in Gemini API credits

Award - ICPC Regionals Gold Medalist
Competition - 2nd Runner-up Invent for the Planet (IFTP) World Finals in France - \$5k Award

Publication - 3 International conference publications related to Advance AI





M. SHAWAIZ KHAN

BS Computer Science

 shawaizniazi917@gmail.com

 +923002615844  LinkedIn

"I enjoy building user interfaces and working on data-driven projects. I aim to begin my career in UI/Frontend Development and later transition into Sports Data Analytics and Data Science."

Core Skills

- C++
- Google Sheets
- HTML/CSS/JS
- Python

Core Competencies

Effective Presentation Skills

Academic Awards

Dean's List 2024

Leadership & Co-Curricular Activities

Futsal Representative & Captain,
Sports & Recreational Club

Registrations Lead,
Sports & Recreational Club

Spectra 25 - Logic Module Lead,
Natural Science Club

Hucon 24 - Volunteer,
Multiverse Club

Bronze Medal In Aku Rowing Competition,
Sports & Recreational Club

Employment Experience

Teaching Assistant - Oop,
Habib University
(August - December 2025)

Teaching Assistant - Dsa,
Habib University
(January - May 2025)

Final Year Project

HU Digital Twin

Creating a digital replica of Habib University's campus, focused on the Projects Lab and Digital Instrumentation Lab, using crowd detection, energy management, and emergency evacuation systems. Computer vision-based crowd detection analyzes one hour of camera footage to anonymously track occupancy and movement within a 3D campus model. Simulated IoT data identifies unused rooms with active assets such as lights and air conditioning to support energy efficiency. The emergency evacuation system helps identify occupied spaces and enables faster, safer evacuation of the premises.





MUHAMMAD SHAYAAN

BS Computer Science

 shayaan.qazil@gmail.com

 +923152256669  LinkedIn

"Computer Science student interested in Artificial Intelligence and Software Development. I enjoy building practical technology solutions, including speech recognition systems, mobile apps, and AI tools for real-world problems."

Core Skills

- Authentication Systems
- Firebase
- Flutter
- Node.js
- Next.js
- PyTorch
- Real-Time Messaging
- Real-Time Synchronization
- REST APIs
- Scalable Cloud Deployment
- Sentiment and Emotion Detection Models
- Transformers
- Urdu Speech Datasets
- Whisper Models

Core Competencies

Agility; Strategic Thinking

Academic Awards

Dean's List 2024

Leadership & Co-Curricular Activities

Student Technology Projects And Hackathon Participation

Employment Experience

Devco (Private) Limited,
Artificial Intelligence Research Assistant
(June 2025 – June 2026)

Final Year Project

Adaptive Boss AI for Dynamic Gameplay in a 2D Platformer

Adaptive Boss AI is a revolutionary project that changes how video game enemies behave. Unlike traditional bosses that follow fixed patterns, our system learns from each player in real time. It observes movement, attacks, defenses, and weapon choices, then adapts its strategy to create unique, unpredictable encounters. This approach makes games more engaging and replayable. Beyond gaming, the same AI framework can improve education, training simulations, and therapy by adjusting challenges based on user behavior. By combining rule-based logic, data-driven strategies, and machine learning, this project introduces a completely new level of interactive intelligence that has never been implemented in real-time, player-facing systems before.

Publications, Creative Projects & Global Experiences

Research Paper – Research paper titled “Emotion Detection from Urdu Speech” published on ResearchGate

Research Paper – The research focuses on applying transformer-based deep learning models to detect emotions from Urdu speech using a custom dataset

Research Paper – Link:
<https://www.researchgate.net/publication/39703>





M. SHAYAN WASIF

BS Computer Science

 shayanwasif351@gmail.com

 +923463238871  LinkedIn

"Techno-commercial Computer Science student passionate about bridging technology and business, generating new ideas, and learning quickly while pursuing a career in sales, business development, and growth within technology-driven organizations."

Core Skills

- Data Structures & Algorithms
- Deep Learning
- Generative AI
- Jira (Product Backlog Management)
- Microsoft Excel
- Python

Core Competencies

Acts with Ownership; Agility; Drive for Results;
Effective Presentation Skills

Leadership & Co-Curricular Activities

Student Ambassador

Member,
Entrepreneurship Club

Member,
Natural Science Club

Member,
Sports & Recreational Club

Member,
Computer Science and Engineering Club

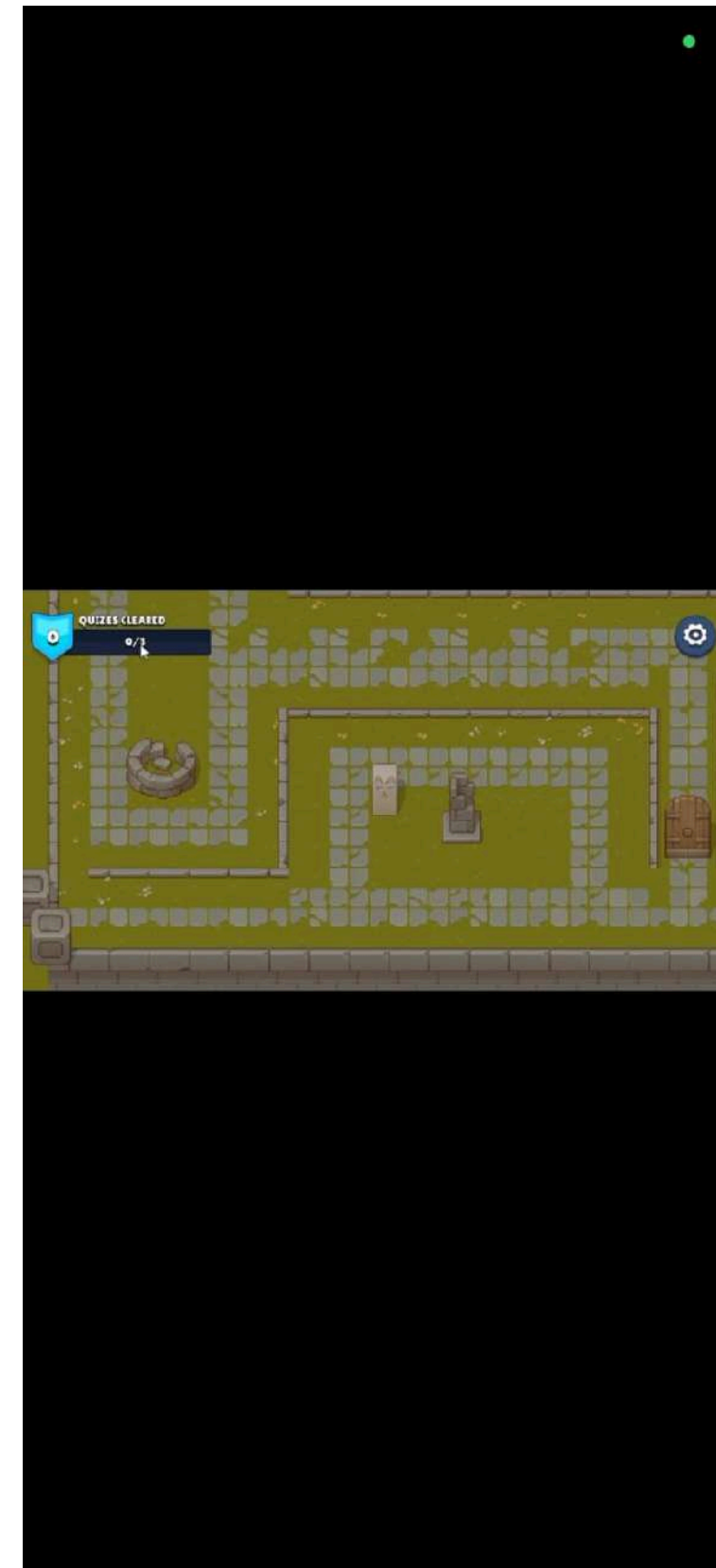
Employment Experience

Product Development Intern,
Transviti
(June – July 2025)

Final Year Project

Threads of Life: A Moral Decision-Based Interactive Narrative Game

Threads of Life is an interactive narrative game designed to explore moral decision-making through realistic scenarios. The project aims to demonstrate how video games can encourage empathy, ethical reflection, and responsible decision-making rather than focusing only on entertainment. Players encounter everyday dilemmas, such as accidents, conflicts, and social challenges, where their responses influence the direction of the story through a branching narrative system. The purpose of the project is to show how interactive media can simulate real-world ethical situations and promote thoughtful behavior. The expected benefit is increased player awareness of consequences, improved moral reasoning, and evidence that narrative-driven games can serve as meaningful educational and reflective tools.





MUHAMMAD TAQI

BS Computer Science
Social Development and Policy

✉ mtaqi0074@gmail.com

☎ +923323244110 🔗 LinkedIn

"I have developed an interest in Data Science and, as such, will be looking for roles in that field."

Core Skills

- Langgraph
- Python
- Sql

Core Competencies

Adaptability; Drive for Results; Strategic Thinking

Leadership & Co-Curricular Activities

Habib University Student Government,
Events Cabinet

Multiverse Club,
Hucon Logistics Team Member

Employment Experience

Internship,
10Pearls
(December 2025 – February 2026)

Teaching Assistant – Introduction to
Large Language Models,
Habib University
(January – April 2026)

Teaching Assistant – Algorithms: Design
and Analysis,
Habib University
(January – April 2026)

Internship,
Systems Limited
(May 2025 – July 2026)

Final Year Project

BookForMe is an agentic AI-powered centralized booking platform designed to streamline reservations for informal service providers such as sports courts, salons, and gaming zones. The system addresses the fragmented WhatsApp-based booking workflow common in Pakistan by automating availability queries, slot reservations, and payment verification. It includes a React Native mobile application for users and an AI Receptionist operating on vendors' WhatsApp Business accounts. The platform employs a bilingual Natural Language Understanding pipeline (English and Roman Urdu), a LangGraph-based conversational agent, and Optimistic Concurrency Control to prevent double bookings. Experimental evaluation of transformer models identified DistilBERT as the optimal intent classifier, achieving 90.5% accuracy. The system improves booking efficiency, reduces vendor workload, and enhances user experience.

Publications, Creative Projects & Global Experiences

Research Paper – Research paper at CLEF 2025 on advertisement-aware generation using LLMs





MUHAMMAD UMAIR

BS Computer Science

 umair123zubair@gmail.com

 +923327942058  LinkedIn

"Game Development excites me most, fueling my passion to create immersive, interesting games. I am motivated by innovative mechanics and intend to pursue a professional career as a game developer."

Core Skills

- C#
- C++
- JavaScript
- Python
- SQL

Core Competencies

Agility; Collaborates Openly; Planning; Takes Initiative

Employment Experience

Knowledge Valley School,
Teacher
(April – May 2024)

Final Year Project

Adaptive AI

My project addresses the predictability of traditional game AI by developing an adaptive boss system for 2D platformers. Using a multi-layered architecture including heuristic rules, data-driven strategies, and reinforcement learning—the AI analyzes player movement and attack patterns in real time to adjust its behavior dynamically. The goal is to enhance player engagement and replayability through personalized challenges while maintaining high-performance standards of 60+ FPS. This research investigates the feasibility and design trade-offs of integrating advanced machine learning models within game engines.





MUHAMMAD WAJEEH

BS Computer Science

✉ smwajeeh2003@gmail.com

☎ +923472880996  LinkedIn

"Driven by curiosity, I enjoy reading, writing, and exploring cybersecurity. My leadership experiences inspire me to pursue a career combining technology and problem-solving, while creating opportunities that empower others to grow."

Core Skills

- HTML/CSS
- MERN
- Project Management
- Python
- Microsoft Excel

Leadership & Co-Curricular Activities

Vice President,
Natural Science Club

Vice President Spectra II,
Natural Science Club

Founder and Event Manager – Spectra,
Natural Science Club

Core Lead Security, Event Coverage &
Content,
Multiverse Club

Security Lead & Director Content,
Gaming Club Habib Debate Union

Employment Experience

Mindstorm Studios,
Game Development
(June – August 2024)

Winklin,
Business Development Executive
(June – September 2022)

Final Year Project

PQNK Centralized Knowledge Base Platform

This research project modernizes sustainable farming through the integration of a centralized web-based repository and an intelligent, multilingual RAG chatbot. The web application serves as a comprehensive knowledge hub, consolidating agricultural resources, research documents, and lecture materials. Central to this initiative is the digitization of expert knowledge, utilizing advanced RAG (Retrieval-Augmented Generation) pipelines and vector databases (Qdrant) to transform decades of specialized agronomic wisdom into accessible digital intelligence. The integrated AgriChat provides real-time, evidence-based support in English and Urdu, bridging the gap between traditional expertise and modern farming. This dual-phase approach enhances information dissemination, fostering informed decision-making and promoting sustainable agricultural growth through permanent digital preservation.





M. YUMMAN BASHIR

BS Computer Science

 yummanbashir987@gmail.com

 +923041288869  LinkedIn

"Excited by the intersection of technical engineering and creative design, my professional path targets Software Engineering, UI/UX, and Product Management to build intuitive, scalable digital experiences."

Core Skills

- C++
- Microsoft Power BI
- Microsoft Power Automate
- Python
- Web Development

Core Competencies

Adaptability; Collaborates Openly; Planning; Takes Initiative

Employment Experience

Research Assistant,
Habib University
(May – August 2025)

Internship,
HBL
(July – August 2024)

Final Year Project

Venue Vision

VenueVision is a 3D event space visualization platform developed as my Computer Science final-year project at Habib University. It leverages advanced graphics technologies, including photogrammetry and Gaussian Splatting, to create highly realistic, interactive spatial environments. By integrating game development techniques, the platform allows users to dynamically explore physical venues through immersive digital rendering and static meshes. The project embodies my passion for the intersection of software engineering and creative design, pushing the boundaries of spatial visualization to solve real-world challenges.





MUNEEBA BADAR

Recipient of Hilton Pharma Grant
BS Computer Science

✉ muneebabadar21@gmail.com

☎ +923096900898  LinkedIn

"I am interested in the infrastructure side of software development, particularly deploying and managing applications at scale using containerization and orchestration tools that enable reliable, efficient systems."

Core Skills

- Automated Container Registry Lifecycle Management
- Azure DevOps
- Azure Marketplace Deployments
- Ci/Cd Pipeline Development
- Infrastructure as Code (Bicep)

Leadership & Co-Curricular Activities

Vice President - Mindstorm Chapter,
Computer Science and Engineering Club

Employment Experience

Data Science Dojo,
Software Engineer Infrastructure Intern
(February – May 2026)

Final Year Project

An AI-powered virtual assistant for visually impaired individuals designed to help them navigate indoor spaces independently. The project focused on improving accessibility within our mobile application, ensuring it met WCAG AA compliance standards. It also aimed to promote independence by assisting with daily tasks such as identifying objects, recognizing currency notes and colors, and performing face recognition.





MUSAB

BS Computer Science
Mathematics

 musab.kas@gmail.com

 +923368277877  LinkedIn

"I am excited by the domain of numerical optimization, high-performance computing, and understanding the mathematics of machine learning. I intend to pursue Data Science and Robotics."

Core Skills

- C++
- Jax
- Nextjs
- Python
- Pytorch

Core Competencies

Drive for Results; Takes Initiative

Academic Awards

Dean's List 2023, 2024, 2025

High Achievement Scholarship 2023, 2024, 2025

President's List 2023, 2025

Leadership & Co-Curricular Activities

President,
Brain.hack() – CSEC (Computer Science and Engineering Club)

Vice President,
Brain.hack() – CSEC (Computer Science and Engineering Club)

Active Member,
Math Club

Employment Experience

Data Science Intern,
Securiti.ai
(June – August 2025)

Summer Tehqiq Research Program –
Student Researcher,
Habib University – GSCP
(May – August 2025)

ML Intern,
Toyota IMC
(November 2024 – June 2025)

Algorithms Researcher,
CISPA Helmholtz Center for Information
Security
(June – July 2024)

Final Year Project

TurboDiff: A 2D Differentiable Fluid Simulator for Wind Turbine Airfoil Optimization

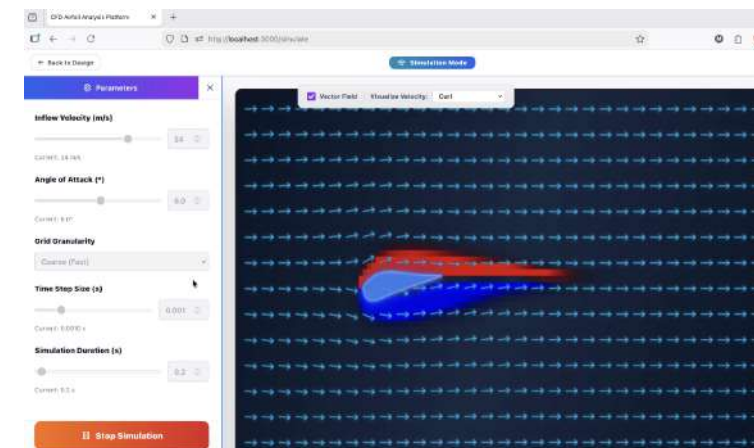
To maximize wind turbine efficiency, traditional design relies on computationally expensive solvers or low-fidelity tools lacking gradient capabilities. We developed TurboDiff, a lightweight, 2D differentiable CFD (Computational Fluid Dynamics) simulator specifically for Aerodynamic Shape Optimization (ASO). By leveraging Automatic Differentiation (AD) and Numerical Optimization, TurboDiff solves incompressible Navier-Stokes equations using Cartesian grids and Signed Distance Functions. This high-performance approach bypasses complex adjoint derivations, instead utilizing automatic gradients to iteratively refine airfoil geometries parameterized by Class-Shape Transformation. The research produced three high-performance airfoil designs tailored for varying power scales. Ultimately, TurboDiff provides an open-source framework bridging differentiable physics and scalable engineering, accelerating high-efficiency wind energy deployment in unique climatic regions like Pakistan's coastal corridors.

Publications, Creative Projects & Global Experiences

Internship – Research Abroad internship at CISPA Helmholtz Center for Information Security in Germany

Competition – Meta Hacker Cup Quarter Finalist – 1st in Pakistan and 128th in the World

Award – ICPC Gold Medalist





NAMEL SHAHID

BS Computer Science

✉ namelshahidparacha@gmail.com

☎ +923217272242  LinkedIn

"Final-year Computer Science student at Habib University interested in building practical technology solutions. Experienced in full-stack development, databases, and applied AI, aiming to grow in software engineering and AI roles."

Core Skills

- Backend Development (Node.js)
- Database Management (MySQL / MongoDB)
- Machine Learning & NLP
- Python Programming
- React.js (Figma/Frontend Development)
- REST APIs

Core Competencies

Adaptability; Takes Initiative

Leadership & Co-Curricular Activities

Member – GDG (Google Developer Group)

Editor – Research & Editorial Cabinet, Pride Press

Employment Experience

Research Assistant,
Habib University
(May – August 2025)

Intern,
Karachi Vocational Training Center
(May – August 2025)

Brand Experience Intern,
Khaadi
(June – August 2024)

Assistant Teacher,
The City School
(January – August 2022)

Final Year Project

Neurohire – AI-based recruitment platform

My team and I developed NeuroHire, an AI-powered recruitment platform designed to improve high-volume hiring for service and retail sectors. Traditional hiring for entry-level roles often relies on manual CV screening and walk-in interviews, which can be slow, inconsistent, and prone to bias. The aim of the project was to create a more efficient and fair screening system. ^[OBJ] The platform allows candidates to submit CVs and short video responses. Using natural language processing and computer vision, the system analyzes CV content, speech clarity, and behavioral cues to generate ranked candidate shortlists for recruiters. ^[OBJ] This approach helps reduce HR workload, speeds up recruitment, and improves accessibility by supporting both English and Urdu applicants.





NAVEEN Z. ZAIDI

BS Computer Science
Design

 naveenzzaidi@gmail.com

 +923229557784  LinkedIn

"I have experience in UI/UX design, wireframing, and prototyping using Adobe Creative Suite and Figma. I'm passionate about crafting digital experiences and seeking a full-time role in a design-focused technology."

Core Skills

- Adobe Creative Suite (Photoshop, Illustrator)
- UI/UX Design
- User Research & Usability Testing
- Wireframing & Prototyping (Figma)

Core Competencies

Adaptability; Collaborates Openly; Planning; Takes Initiative

Leadership & Co-Curricular Activities

Treasurer,
HUAIC (Habib University Artificial Intelligence Chapter)

Graphic Designer,
Pride Press

Content Writer,
Pride Press

Employment Experience

Undergraduate Researcher,
Habib University
(March – June 2026)

Research Assistant,
Summer Tehqiq Research Program –
Habib University
(May – August 2025)

UI/UX Design Intern,
Blutech Consulting
(June – July 2024)

Final Year Project

Threads of Life

Threads of Life is an AI-driven interactive narrative game designed to promote ethical reasoning and empathy among teenagers aged 14–19. The project explores how everyday moral dilemmas can be used as learning experiences within a game environment. Players encounter realistic scenarios and respond in their own words, which are analyzed by an AI system to determine the moral direction of their choices. The game world then adapts dynamically based on these decisions, illustrating consequences and encouraging reflection. The aim is to shift gaming from purely entertainment toward meaningful engagement, helping young players develop empathy, responsibility, and critical thinking skills through immersive storytelling and interactive decision-making.





NEHAL N. HAJI

BS Computer Science

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☎ +923308555519  LinkedIn

"Given the courses I have taken, as well as my research and work experience, the field that excites me the most is AI, particularly Computer Vision, Agentic AI, and MLOps."

Core Skills

- AWS
- Deep Learning
- MongoDB
- NextJS
- Python

Core Competencies

Acts with Ownership; Adaptability;
Collaborates Openly; Effective Presentation
Skills; Encourages Innovation; Problem Solving;
Strategic Thinking; Takes Initiative

Academic Awards

Dean's List 2023, 2024, 2025

High Achievement Scholarship 2023,
2025

President's List 2023, 2024, 2025

Leadership & Co-Curricular Activities

Lead – Google Developer Group On
Campus

HUCON – Core & Vendors Team

Vice President,
Entrepreneurship Club

Academic Affairs Member & Batch
Representative Cs,
Habib University Student Government

Employment Experience

Cloud Intern,
Atomic Computing
(December 2025 – June 2026)

Undergraduate Researcher,
Habib University
(October – December 2025)

Analyst Intern,
Liberty City Ventures
(July 2025)

Final Year Project

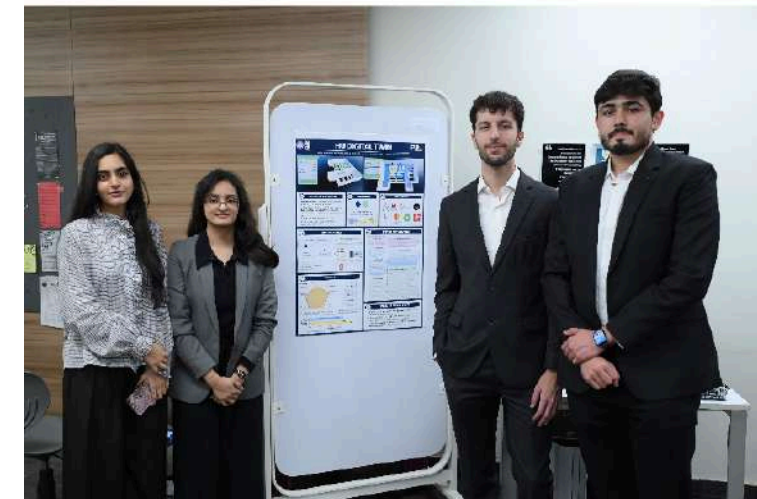
HU Digital Twin

A real-time 3D visualization of the Projects and Digital Instrumentation Lab that aids the security and facilities team with three aspects: emergency response, crowd management, and energy efficiency. It uses YOLO as well as Bytetrack and translates the coordinates of people detected in the real-time stream and displays them onto the 3D model to provide real-time visibility of the lab without having to scroll screens. It also sends automated alerts to assigned CSOs in the event of emergencies in case the lab(s) aren't vacated. Automated alerts are sent to the facilities team in case the HVAC system is running when there is no one inside the premises. A real-time crowd count is also provided to aid in crowd monitoring.

Publications, Creative Projects & Global Experiences

Research Paper – Research paper on Multi-Agent Reinforcement Learning submitted to ICML 2026

Research Paper – Research paper on Predicting the Expansion of the Thar Desert using Deep Learning submitted to IGARSS 2026





OMER S. SALEH

BS Computer Science

 omer.saleh2003@gmail.com

 +923218295009  LinkedIn

"As a Computer Science student and entrepreneur, I am passionate about bridging technical engineering with product strategy. I aim to become a Product Manager in my field."

Core Skills

- C++
- BinO-Code Development
- MS SQL
- Python

Core Competencies

Adaptability; Collaborates Openly; Planning;
Takes Initiative

Academic Awards

High Achievement Scholarship 2022,
2023, 2024, 2025, 2026

Employment Experience

Workstream Automation Ltd,
No-Code App Developer Intern
(June 2025 – March 2026)

HBL,
Product Team Intern
(RPA)
(July – August 2024)

Final Year Project

Venue Vision

VenueVision is an event management platform that automates 3D venue generation from 2D floor plans and photographs. It enables customers to visualize their booked space with specific assets, providing a true-to-life representation to ensure layouts are not overcrowded and turns their imagination into a true-to-life 3D reality. For vendors, the platform establishes a digital presence while digitizing physical inventory. By photographing assets such as chairs and tables, the system creates 3D models that customers can interactively place onto 2D floor plans to view in an immersive 3D environment. This streamlines the planning process, reduces manual design effort, and ensures high spatial accuracy for both organizers and venue owners.





QAZI M. MUSTAFA

BS Computer Science

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 +923313664203  LinkedIn

"Final-year Computer Science student interested in Full-Stack Development, Software Quality Assurance, and AI Systems. Passionate about building scalable applications and solving real-world problems through reliable software engineering."

Core Skills

- Database Design
- Full-Stack Development
- Node.js
- Python
- QA - Automation/Unit Testing
- React.js
- SQL
- Software Testing
- TypeScript
- JavaScript

Core Competencies

Drive for Results

Employment Experience

Software Engineering Partner (Final Year Project),

Al Khidmat Foundation

(August 2025 – May 2026)

Freelance Software Developer,

Pasha Marble

(March – August 2025)

Sales Representative,

Ibex Global – Squaretrade

(June – September 2024)

Final Year Project

AI-Powered Data Analysis and Reporting Platform for NGOs

This project focuses on developing an AI-powered digital platform for the NGO Al Khidmat to automate organizational reporting and data analysis. The system integrates multiple large language models to generate analytical reports and visual insights from organizational data. The platform enables automated document processing, data summarization, and graphical reporting to support decision-making. My role involves designing the system architecture, implementing backend services, and integrating AI components into the platform. The project aims to improve operational efficiency by transforming large volumes of data into actionable insights while providing a scalable and reliable digital infrastructure for the organization.





QURBA MUSHTAQUE

BS Computer Science

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☎ +923302628715  LinkedIn

"I enjoy working in interdisciplinary environments, where I have the opportunity to gain broader perspectives. The areas that interest me include think tanks, policy, or research institutions."

Core Skills

- Data Analytics
- Excel
- Figma
- Python

Core Competencies

Agility

Leadership & Co-Curricular Activities

General Secretary,
Wise (Women in Science and Engineering)

Employment Experience

Research Assistant,
Habib University
(June – August 2025)

Final Year Project

N/A

My Final Year Project is V-EYE (Virtual Eye), a mobile app that helps visually impaired people navigate indoors independently, without relying on others. Pakistan has over 26 million people living with vision impairments. V-EYE uses a smartphone camera to describe surroundings through voice in English and Urdu. It identifies nearby objects, recognizes familiar faces, detects colors, and identifies Pakistani currency notes in real time. Accessibility was a core focus throughout development. The app follows accessibility standards to ensure it works for people with full or partial blindness, and since it runs on an ordinary smartphone, it is affordable and available to people from all backgrounds. The goal is to give visually impaired individuals greater confidence and independence in daily life.

Publications, Creative Projects & Global Experiences

Publication – Understanding Pakistani Mothers' Use and Non-Use of Screen Media-Based Devices: Gratifications, Strategies, and Design Implications (ACM CHI2025)





RAAHIM HASHMI

Bank Al Baraka HU TOPS Scholar

BS Computer Science

Electrical and Computer Engineering

✉ raahimhashmi14@gmail.com

☎ +923308248530  LinkedIn

"I am interested in theoretical computer science, particularly algorithm design and analysis, computational complexity, and computability, as well as robotics, with a focus on locomotion algorithms."

Core Skills

- Isaac Lab
- Isaac Sim
- Matlab
- Python
- Ros2

Core Competencies

Drive for Results

Academic Awards

Dean's List 2023, 2024, 2025

High Achievement Scholarship 2023, 2025

President's List 2023, 2024, 2025

Leadership & Co-Curricular Activities

Vice President,
Math Club

Employment Experience

Teaching Assistant,
Habib University
(September – December 2024)

Undergraduate Researcher,
Habib University
(June – August 2024)

Teaching Assistant,
Habib University
(January – May 2024)

Undergraduate Student Researcher,
Habib University
(June – December 2023)

Final Year Project

Quadruped Locomotion in Rough Terrain and Confined Environments

Legged robots are used for inspection, exploration, and search and rescue missions in tough environments such as caves. In our capstone project, we sought to make a hobby-grade legged robot kit capable of traversing rough terrain and navigating through confined spaces. We upgraded the hardware and developed a simulation package for the robot. We used classical control techniques, learning-based approaches, and evolutionary algorithms for locomotion in rough terrain, along with computer vision techniques to perceive obstacles and decide on a posture that was used to constrain the locomotion algorithms to ensure the robot moved with a height and width that did not collide with the environment. Thanks to our simulation package, we were able to rapidly test our algorithms.

Publications, Creative Projects & Global Experiences

Research Paper – Research Abroad Program at Texas A&M University – Worked on mathematical optimization





RAMEEZ WASIF

BS Computer Science

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☎️ +923352999975 🔗 LinkedIn

"Interested in and have experience with Data Science, Generative AI, and Software Development. I am open to roles in the following fields: Software, AI, Data, Product, Consultancy, and Fintech."

Core Skills

- Aws
- Langchain
- Python
- Sql
- Unity

Core Competencies

Agility; Strategic Thinking

Academic Awards

High Achievement Scholarship 2022, 2023, 2024, 2025

Leadership & Co-Curricular Activities

Tehzeeb,
Events Lead

Employment Experience

Prompt Engineer,
Turing
(September – November 2025)

Data Analytics Intern,
Systems Limited
(July – August 2025)

Data Science/Gen AI Intern,
TenX
(July – August 2024)

Final Year Project

Gamified Physiotherapy System

This project presents a health-tech AI product that gamifies physiotherapy to improve rehabilitation outcomes. The system uses AI-powered computer vision to track patient movements through a webcam or depth camera and compare them with clinically recorded reference exercises. Rehabilitation exercises are transformed into interactive mini-games, while the AI model evaluates movement accuracy and provides real-time corrective feedback. The platform also includes patient and physiotherapist dashboards for monitoring progress, adherence, and recovery metrics. By combining AI motion analysis, gamification, and remote monitoring, the product aims to increase therapy adherence, ensure correct exercise performance, and make physiotherapy more accessible and engaging.

Publications, Creative Projects & Global Experiences

Research Paper – Research paper on NLP topic modelling approaches under the Summer Tehqiq Research Program





RASIB QAZI

BS Computer Science

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 +923332024777  LinkedIn

"Motivated by solving real problems through technology, user research, and product design, I aim to pursue Product Management, building impactful digital products by combining data, user insights, and thoughtful development."

Core Skills

- Figma
- Neo 4j
- Python
- React Native
- Sql

Core Competencies

Adaptability; Planning; Takes Initiative

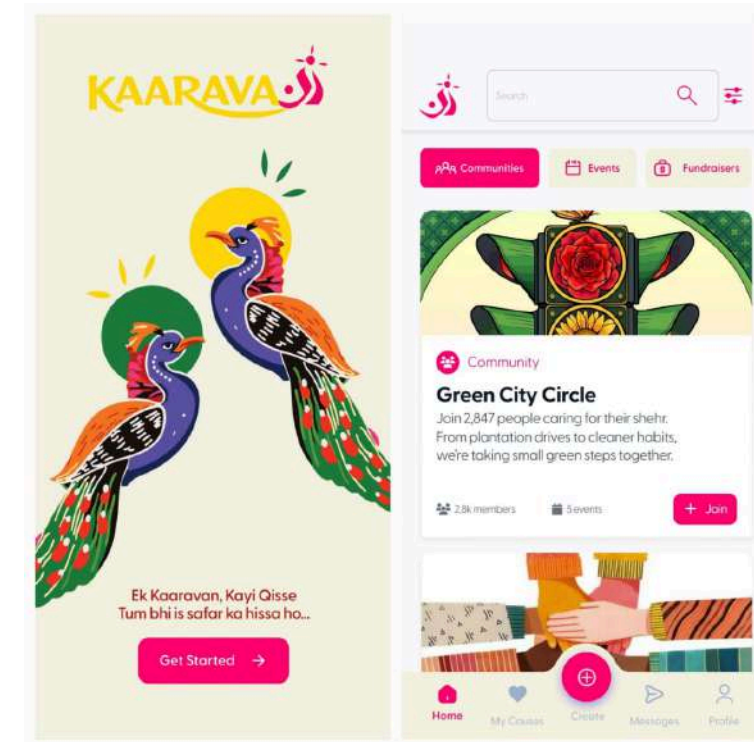
Employment Experience

Pakistan Agriculture Research,
Data Science Intern
(June – August 2024)

Final Year Project

Karavaan: A Community Engagement and Social Impact Platform

Karavaan is a mobile platform designed to connect volunteers, donors, and community organizations in a single digital space. The project addresses the fragmentation of social initiatives across platforms like WhatsApp and social media, which makes it difficult to discover events, coordinate volunteers, and track fundraising efforts. The system enables community creation, event management with RSVP tracking, fundraiser listings, and real-time messaging. It integrates Google OAuth for authentication, Firebase notifications for alerts, and recommendation algorithms to personalize content for users. By consolidating these features into one platform, Karavaan aims to improve transparency, coordination, and participation in social impact initiatives across Pakistan.





RAYYAN S. AHMED

BS Computer Science
Mathematics

✉ reyyanahmed972@gmail.com

☎ +923152627139  LinkedIn

"I am interested in exploring the AI/ML space."

Core Skills

- C++
- Graph
- Javascript
- Langchain
- Python
- SQL

Core Competencies

Adaptability; Collaborates Openly; Takes Initiative

Final Year Project

Agentic AI for Payment Switch Systems - TPS

My FYP leverages Agentic AI and LangGraph to transform traditional monitoring into an autonomous, self-healing framework. Designed for high-stakes financial environments, the project aims to replace manual triaging with a multi-agent system capable of real-time log analysis, database optimization, and code review. The purpose is to move beyond static, rule-based alerts toward GenAI-driven reasoning that diagnoses and remediates system failures independently. By deploying specialized agents to handle complex operational tasks, the system drastically reduces Mean Time to Resolution (MTTR) and enhances infrastructure reliability. The primary benefit is a scalable, intelligent automation layer that ensures 24/7 stability for payment switches, redefining how we manage and secure enterprise-scale digital ecosystems through the intersection of DevOps and Generative AI.





ROHAAN AHMED

BS Computer Science
Mathematics

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"Based on my research and CS projects, I am interested in deriving meaningful insights through analysis to support product management and development, with a strong focus on sustainability-driven solutions."

Core Skills

- C++/C#
- Excel & Microsoft Suite
- Java/HTML (Computer Graphics)
- Python
- Unity (Game Development)

Core Competencies

Acts with Ownership; Collaborates Openly;
Effective Presentation Skills; Planning; Takes Initiative

Employment Experience

Quality Assurance Engineer,
Chronicler.io
(July – August 2025)

Peer Tutor – Scientific Methods (Excel),
Habib University
(February – April 2025)

Teaching Assistant,
Habib University
(August – December 2024)

Teaching Assistant – Calculus 2,
Habib University
(January – April 2024)

Final Year Project

Empathy Building Game for Down Syndrome

This gamified interactive environment addresses the societal empathy gap regarding the cognitive and motor challenges experienced by individuals with Down syndrome. Users collaborate with an AI companion that simulates these real-world communication and coordination difficulties. The system employs machine learning and authentic data to dynamically adjust the companion's behavior based on the player's patience and supportiveness. To assess its effectiveness, an iterative evaluation framework utilizes pre- and post-testing alongside Kirkpatrick's model to measure shifts in user empathy and behavior. Consequently, this educational tool cultivates inclusive interaction skills and builds broader societal awareness.

Publications, Creative Projects & Global Experiences

Research Paper – Seeing Sound with light





ROOZAIN Z. QAZALBASH

EBM HU TOPS Scholar

BS Computer Science
Mathematics

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☎ +923374005903  LinkedIn

"I want to work as a Data Analyst or AI Engineer. I am personally driven by data, so I actively explore both data science and data analysis."

Core Skills

- Figma
- Microsoft Excel
- Neural Networks
- Node JS
- Python
- React

Core Competencies

Drive for Results

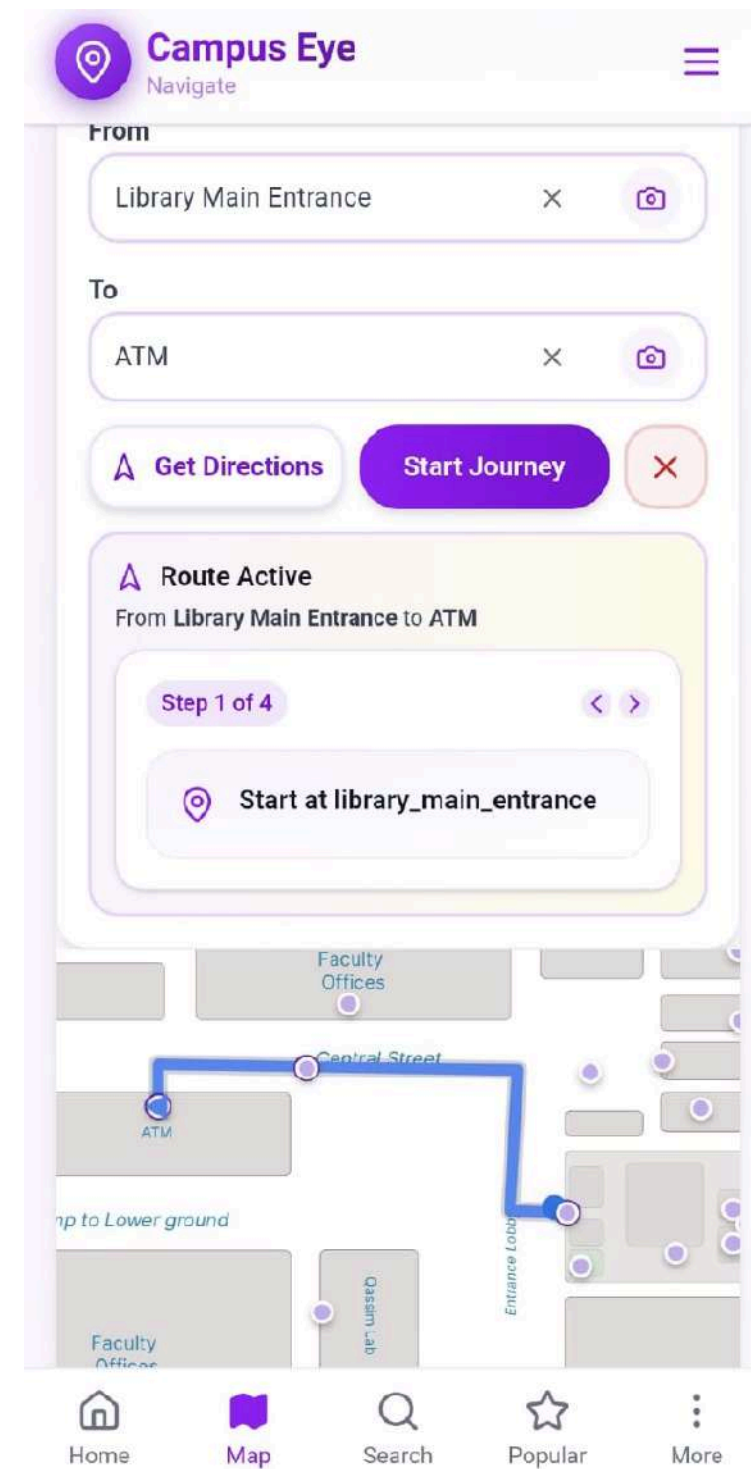
Employment Experience

Project Intern,
AF Ferguson & Co. (PwC Pk)
(May – September 2025)

Final Year Project

CampusEye

An indoor navigation app for Habib University campus using VPR technology, enabling users to take a picture of their surroundings and get directions/routes to their destination, enabling user localization using dead reckoning and Wi-Fi fingerprinting without any external infrastructure required.





RUBAB SHAH

BS Computer Science

Philosophy

✉ shahrubab2003@gmail.com

☎ +923311386266  LinkedIn

"I'm particularly excited about interdisciplinary fields such as Computational Biology. I aim to pursue my higher studies in a similar field and work as a Researcher."

Core Skills

- C++
- Data Science
- Machine Learning
- Python

Core Competencies

Adaptability; Takes Initiative

Academic Awards

Dean's List 2024, 2025

Leadership & Co-Curricular Activities

Vice President,
Computer Science and Engineering Club

Design,
Computer Science and Engineering Club

Employment Experience

Teaching Assistant – Data Science,
Habib University
(September – December 2025)

Research Assistant,
Lums
(May – November 2025)

Teaching Assistant – Database Systems,
Habib University
(August – December 2024)

Undergraduate Researcher,
Habib University
(June – August 2024)

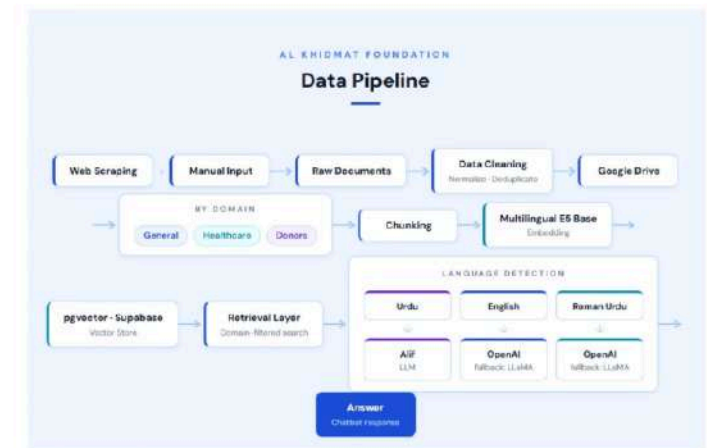
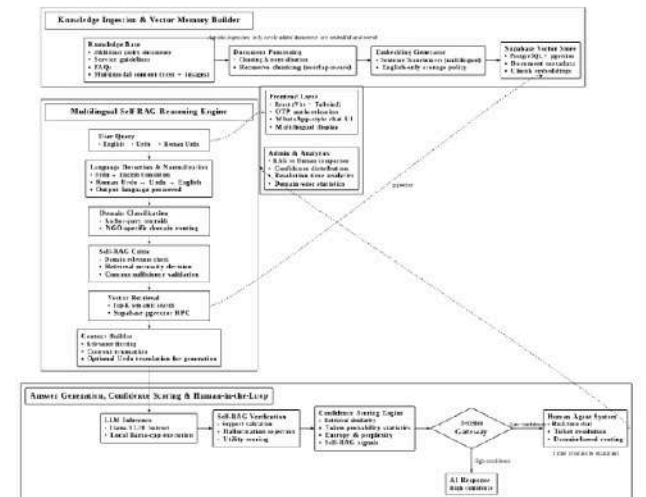
Final Year Project

Alkhidmat Public Chat Portal

The AI-powered multilingual chat portal for Alkhidmat Foundation addresses manual query-handling delays by providing a centralized, inclusive solution. Using a Self-RAG (Retrieval-Augmented Generation) and Agentic AI pipeline, it automates responses for donor, healthcare, and general domains in English, Urdu, and Roman Urdu. The system utilizes multilingual-e5-base embeddings and pgvector for semantic search, with OpenAI and Alif for generation. To ensure accuracy, it employs a domain classification and confidence scoring engine that fuses retrieval quality with token probability. Key benefits include 24/7 accessibility for underserved communities, reduced staff workload, and automatic human-agent escalation for complex queries. Moreover, there is a dedicated admin dashboard to view LLM analytics and update the RAG Knowledge Base.

Publications, Creative Projects & Global Experiences

Publication – "ML-Driven Distribution Network Aggregation Considering Load and Inverter-Based Resources", 2024 26th International Multi-Topic Conference (INMIC), Karachi, Pakistan, 2024, pp. 1-6, doi: 10.1109/INMIC64792.2024.11004393.





SABAHAT ZAHRA

EBM HU TOPS Scholar

BS Computer Science

✉ sabahatamin73@gmail.com

☎ +923232612386  LinkedIn

"I enjoy working in AI and have completed internships in the field at reputable organizations such as Folio3. What excites me most is its continuous evolution and rapid innovation."

Core Skills

- Deep Learning
- Llmgenaid
- Mern Stack
- Python

Core Competencies

Adaptability

Leadership & Co-Curricular Activities

President,
Wise (Women in Science and Engineering)

Employment Experience

Instructor,
Codeschool
(October 2025 – February 2026)

AI/ML Intern,
Folio3
(October – November 2025)

Full Stack Developer Intern,
Blutech Consulting
(June – July 2024)

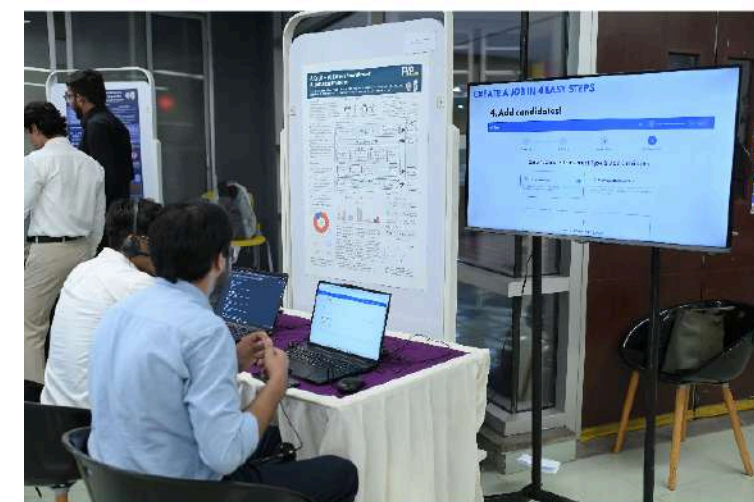
Final Year Project

AI CRUIT

We are automating the hiring pipeline by building a multi-agent system that parses resumes, conducts AI interviews, and scores and shortlists candidates. This approach reduces manual effort and helps minimize human bias, ensuring the process is fairer and more efficient.

Publications, Creative Projects & Global Experiences

Publication – "Sexism Identification in Tweets Using Ensembles & Augmentation: A Multilingual Approach" has been accepted for the EXIST Lab at CLEF 2025





SABAHATULLAH SHAIKH

BS Computer Science

✉ sabahat.ullah3@gmail.com

☎ +923327221008  LinkedIn

*"I will likely join my father's construction business
and contribute to its growth and future
development."*

Core Skills

- Python
- React
- Sql
- Unity

Core Competencies

Acts with Ownership; Adaptability; Agility;
Collaborates Openly; Effective Presentation
Skills; Encourages Innovation; Planning; Takes
Initiative

Leadership & Co-Curricular Activities

Playwrite,
Dream Stage

Final Year Project

Kindquest

KindQuest is a 2D Unity-based game
designed to promote awareness and
empathy among young children by helping
them better understand Down syndrome
and its characteristics.





SAMEER KAMANI

BS Computer Science

sameerkamani03@gmail.com

+923322442343 LinkedIn

"I'm a Habib University senior specializing in AI Engineering. I'm driven by a motto of constant growth and motivated by the rapid pace of innovation within the global technology community."

Core Skills

- Agentic_AI
- FastAPI
- LangChain
- MCP
- PythonLangGraph

Core Competencies

Collaborates Openly; Planning; Takes Initiative

Academic Awards

Dean's List 2025

Leadership & Co-Curricular Activities

Food And Hygiene Member,
Habib University Student Government

Events Lead,
Gaming Club Habib Debate Union

Table Tennis Representative,
Sports & Recreational Club

Media Team For Hucon,
Multiverse Club

Pinktober Volunteer,
Serve Club

Employment Experience

Data Science Intern,
10-Pearls
(June – August 2025)

AI Engineering Intern,
Systems Limited
(May – August 2025)

Full Stack Developer (Freelancer),
Aura – AI Umeed Rehabilitation
Association for Cerebral Palsy
(May – August 2025)

Data Analyst/Marketing Intern, Jaffer
Brothers
(June – July 2024)

Final Year Project

Sehat Guru

Sehat Guru is an AI-powered fitness and nutrition companion specifically designed to address the limitations of mainstream health apps like MyFitnessPal, which often lack accurate data for South Asian diets. As health issues like diabetes rise in the region, this project aims to provide culturally relevant dietary advice through a custom dataset of over 5,000 images covering 20+ Pakistani dishes, achieving 95% accuracy in dish recognition. The system utilizes an agentic AI pipeline to deliver personalized nutritional guidance validated against certified nutritionist datasets. By combining a React Native mobile interface with a FastAPI backend, the project offers a secure, real-time solution for users to manage their health within their specific cultural and dietary contexts.

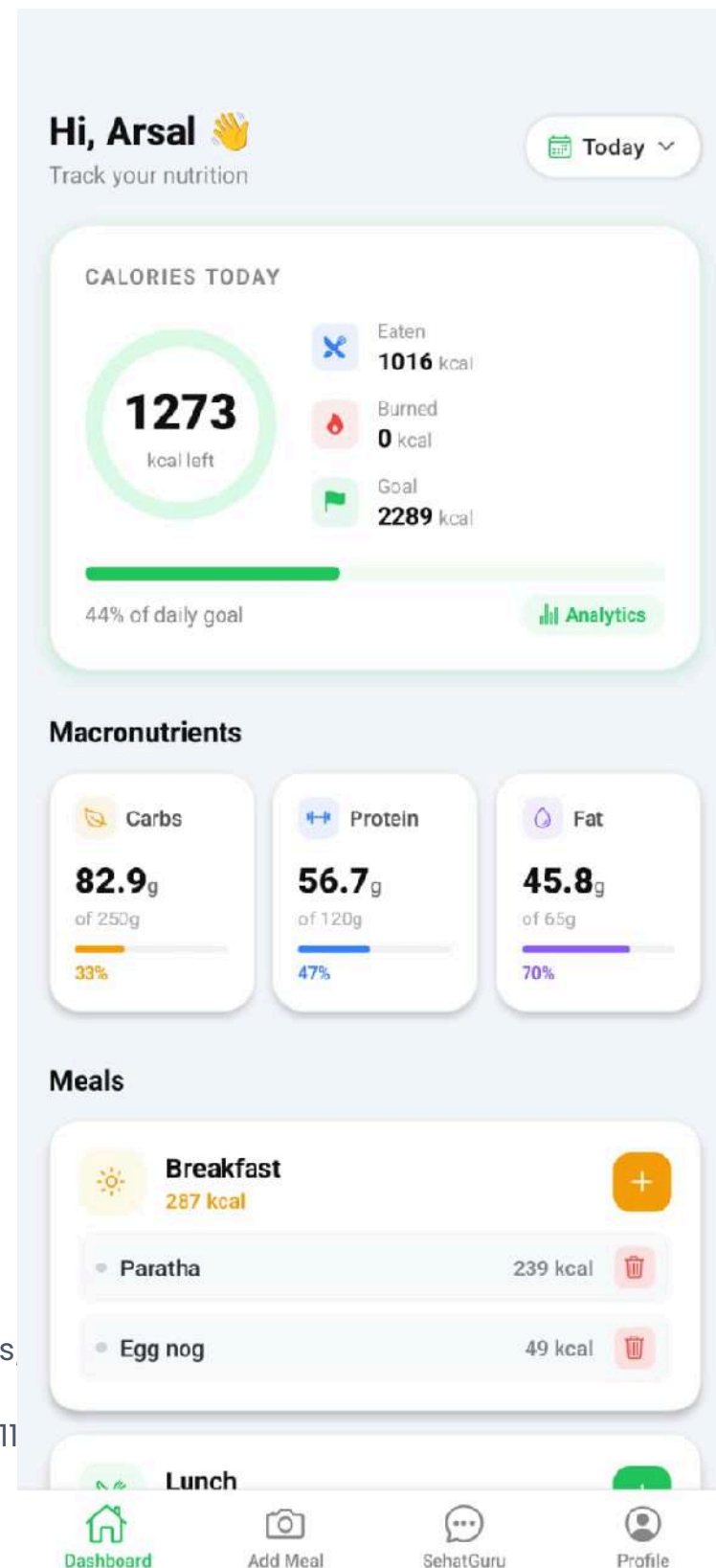
Publications,Creative Projects & Global Experiences

Publication –

<https://downloads.webis.de/touche/publications>

Publication –

<https://ieeexplore.ieee.org/abstract/document/11>





SARA BALOCH

BS Computer Science

✉ sara.baloch@icloud.com

☎ +923323090749  LinkedIn

"I'm exploring how art, mental health, education, and policy can shape equitable futures, while applying skills in CS, Data Science, and AI to build ethical solutions across tech/creative industries."

Core Skills

- C++
- Database Systems
- Participatory Research
- Python
- Qualitative & Quantitative Research

Leadership & Co-Curricular Activities

Head Of Media,
Sustainability Club

Employment Experience

Technical Content Engineer,
Data Science Dojo
(March – June 2026)

Data/Research Intern,
Centre for Arts and Wellbeing
(July – October 2025)

Online Instructor,
CodeSchool.pk
(February – August 2025)

Android Developer,
Durbeen
(July – August 2024)

Final Year Project

EthnoVerse

This project presents EthnoVerse, a digital archive building immersive 3D representations of culturally significant spaces in Sindh, a region whose rich heritage remains underrepresented in global digital preservation. Using 3D Gaussian Splatting, we capture multi-view images of physical environments and reconstruct them as photorealistic, real-time navigable scenes without requiring specialized hardware or high computational infrastructure. These interactive environments are deployed through a web-based platform, enabling free exploration of spaces that hold communal memory, ritual, and daily life. By centering communities often excluded from digital heritage initiatives, EthnoVerse offers both a preservation tool and a counter-archive, creating space for Sindhi cultural expression through accessible technology and immersive storytelling.





SARAH F. SIKANDAR

Ismat & Mustafa Kassam HU TOPS Scholar

BS Computer Science
Design

 faisalsara124@gmail.com

 +923221251597  LinkedIn

"A final-year student passionate about AI engineering, focused on LLM fine-tuning, AI agents, and alignment. Eager to build intelligent, reliable, and responsibly designed systems as I begin my professional journey."

Core Skills

- AI Agent Development
- Ensemble Learning & Data Augmentation
- LLM & Prompt Engineering
- Natural Language Processing
- Python & ML Pipelines

Core Competencies

Planning; Takes Initiative

Leadership & Co-Curricular Activities

Orientation Leader

Operations Lead,
Serve Club

Vice Chair- Events Cabinet,
Habib University Student Government

Table Tennis Representative,
Sports & Recreational Club

Employment Experience

AI Engineer Intern,
Improdata
(March – May 2026)

AI Engineer Intern,
Folio3
(September 2025 – March 2026)

Final Year Project

AI-Cruit

AI-Cruit is an AI-driven recruitment automation platform developed as a final-year Kaavish project at Habib University, in collaboration with Folio3 Pvt. Ltd. The project aims to address the inefficiencies and inconsistencies of manual hiring processes by integrating large language models into an end-to-end recruitment pipeline. The system automates resume parsing, candidate evaluation, and adaptive interview generation — tailoring questions to each candidate's profile. Responses are automatically transcribed, analyzed, and scored, providing recruiters with structured evaluation reports. An automated proctoring feature ensures interview integrity. The platform's key benefit is significantly reducing recruiter workload while improving consistency and fairness in candidate assessment, ultimately making the hiring process faster, smarter, and more reliable.

Publications,Creative Projects & Global Experiences

Research Paper – Sexism Identification in Tweets Using Ensembles & Augmentation: A Multilingual Approach Accepted at EXIST Lab

Conference Presentation – CLEF (Conference and Labs of the Evaluation Forum) 2025 (Madrid, Spain)

Publication – https://lnkd.in/d_B34wvH





SARFARAZ BAIG

BS Computer Science

 sarfarazb08@gmail.com

 +923352633184  LinkedIn

"Computer Science major interested in insights from data and building practical software systems. Creative pursuits in prop-making and storytelling shape how I think about design, detail, and user experience."

Core Skills

- Numpy
- Pandas
- Python
- Pytorch
- React

Leadership & Co-Curricular Activities

HBL x HU Campus Catalyst
StudentAmbassador

HUCON – Cosplay Participant
KVTC – Website Developer
Treasurer,
Dream Stage

Employment Experience

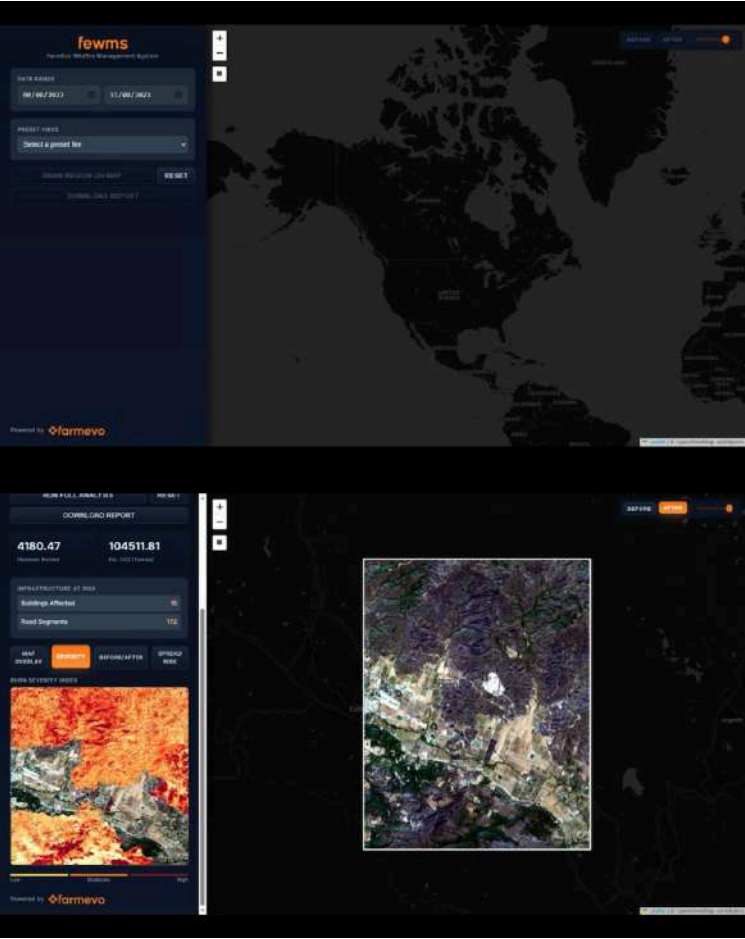
Information Technology Intern,
K-Electric
(June – August 2025)

Undergraduate Research Assistant,
Habib University
(May – August 2025)

Final Year Project

FarmEvo Wildfire Monitoring System (FEWMS)

The FarmEvo Wildfire Monitoring System is designed to help identify and monitor wildfire damage using satellite imagery and machine learning. Wildfires can spread quickly and are difficult to track across large regions, making timely detection important for environmental monitoring and disaster response. This project focuses on developing an automated system that analyzes satellite data to detect burnt land and changes in vegetation health. Using deep learning models and remote sensing data from Sentinel satellites, the system can identify affected areas and provide insights that may support faster assessment and response. The goal is to demonstrate how artificial intelligence and satellite data can be combined to improve large-scale environmental monitoring and support more informed decision-making.





SHIFA SHAH

BS Computer Science

✉ shifashah103@gmail.com

☎ +923023053331  LinkedIn

"My interests lie in Machine Learning, Computer Vision, and Generative AI. I aim to grow as an AI Engineer/Researcher, building technologies that solve real-world problems and create meaningful impact."

Core Skills

- Deep Learning – PyTorch/TensorFlow
- Generative AI/LLM Applications
- Python

Employment Experience

Systems Limited,
AI Intern
(June – July 2025)

Final Year Project

We developed an AI-powered assistive application designed to help visually impaired individuals better understand their surroundings. The app focuses on indoor object detection and provides real-time audio feedback through four different modes: object detection, person detection, color recognition, and currency recognition. The aim of the project was to improve independence and accessibility for visually impaired users. Using computer vision, the application can detect common indoor objects, recognize people nearby, identify colors, and read PKR currency notes. The main benefit of the project is demonstrating how AI and computer vision can be used to create practical assistive technology that improves the quality of life for visually impaired individuals.





SIMRA SHAMIM

BS Computer Science

✉ simrashamimss@gmail.com

☎ +923359286460  LinkedIn

"My interests lie in Data Analytics and Product Management, where I aim to combine analytical thinking and user-focused design to build impactful, data-driven products."

Core Skills

- Balsamic
- Excel
- Figma
- Jira
- Power BI
- Python
- Requirement Elicitation
- SQL
- Trello
- User Stories

Employment Experience

Al-Khidmat,
Frontend Developer & Data Manager
(August 2025 – May 2026)

Final Year Project

Al-Khidmat Internal and Executive Chatbot

The Al-Khidmat Internal and Executive Chatbot is an AI-powered platform designed to help organizational leadership quickly access operational and donor data through natural language queries. The system integrates with internal ERP and donor management databases, enabling executives and staff to ask questions and receive instant insights, reports, and summaries. Its aim is to improve decision-making, reduce manual reporting, and make organizational data more accessible. The project focuses on building a secure, scalable interface with dashboards and conversational AI capabilities. By automating data retrieval and analysis, the system helps leadership monitor program impact, track donations, and generate reports efficiently, ultimately supporting more transparent and data-driven humanitarian operations.





S. FAHAD NADEEM

BS Computer Science

 syedfahadnadeem082@gmail.com

 +923232078823  LinkedIn

"Computer Science student interested in Full Stack and Product Development, building scalable, data-driven applications. Passionate about translating real-world problems into user-focused solutions while growing in system design and engineering."

Core Skills

- Agile / Scrum
- C++
- Data Analysis
- Django
- Git
- Java
- JavaScript
- JIRA
- Machine Learning
- MongoDB
- Node.js
- Penetration Testing (Black-box, Gray-box)
- Postman
- PostgreSQL
- Python
- Redis
- REST APIs
- SQL Data Modeling

Employment Experience

Bank Al Habib,
IT Intern
(June – August 2024)

Final Year Project

ZaraiLink Trade Intelligence

ZaraiLink is a trade intelligence platform that helps Pakistani importers and exporters overcome the lack of reliable market information in global trade. Businesses rely on limited networks and guesswork, lacking direct access to verified counterparty performance data from official customs filings. The platform's natural language search engine enables users to discover suppliers and buyers and compare their trading volumes, shipment frequency, and pricing behavior. TradeLens tracks product-level market trends, TradeLedge supports company-level evaluation, and the Trade Directory provides verified company profiles and contacts, combining discovery and analysis to reduce uncertainty in trade decisions.

Publications, Creative Projects & Global Experiences

Competition – Represented the University in the Global Invent for the Planet Challenge





S. MAAZ ULLAH SHAH

BS Computer Science

✉ maazushah@outlook.com

☎ +923157722880  LinkedIn

"Understanding software and the system design of modern applications strongly motivates me. I have already begun my journey as a software engineer and aim to continue growing in this field."

Core Skills

- C Sharp
- C ++
- Machine Learning
- MERN
- PERN

Employment Experience

Software Engineer,
Impetus Systems (Flowhcm)
(November 2025 – December 2027)

Final Year Project

Helping SMEs in Pakistan track and measure their carbon emissions across different scopes while providing advanced analytics and insights based on their operational and business activities.

Publications, Creative Projects & Global Experiences

Hackathon – Faysal Bank Hackathon Winner





S. MUHAMMAD HUNAIN ABBAS

BS Computer Science

✉ hunainabbas22@gmail.com

☎ +923027105335  LinkedIn

"I aspire to build my own entrepreneurial venture, but first I hope to gain experience in Data Science, Software Development, and Project Management."

Core Skills

- Fastapi
- Langchain
- Project Management
- Python
- Sql

Core Competencies

Agility

Leadership & Co-Curricular Activities

Bazm-E-Aqeedat - Team Lead

Freshman Council - Husg Member

Rad Member

Vice President,
Araish - E - Khayal

Team Lead,
Serve Club

Employment Experience

Intern,
K Electric
(June - August 2024)

Final Year Project

Alkhidmat - Internal Chatbot and Reporting Portal

My project is an AI-powered internal executive chat and reporting portal for Alkhidmat. It is designed to help staff and leadership quickly access organizational data without spending hours on manual database queries, analysis, and report writing. The main aim is to improve efficiency, accuracy, and decision-making by allowing users to request reports or insights through a chatbot interface. The system can retrieve information from donor management systems, ERP modules, and internal reporting platforms, then present it in a clear and usable format. Its benefits include saving time, reducing workload, improving report consistency, supporting data-driven planning, and making important organizational information more accessible for executives and staff across different departments and functions.





S. ZUHAIR ABBAS RIZVI

BS Computer Science
Design

✉ zuhair.abbas2503@gmail.com

☎ +923347287642  LinkedIn

"I am interested in visual computing, particularly computer vision and simulation. My intended path is R&D, where I use my research prowess to develop cutting-edge systems."

Core Skills

- Azure
- Blender
- Docker
- Git
- GLSL
- Hugging Face
- Langchain
- Langfuse
- LLaMA OpenAI
- OpenCV
- OpenGL
- Photoshop
- Postman
- PyTorch ROS2
- RViz
- Tensorflow
- WebGL

Core Competencies

Acts with Ownership; Agility; Collaborates Openly; Drive for Results; Encourages Innovation; Planning; Problem Solving; Takes Initiative

Academic Awards

Dean's List 2023, 2024, 2025

President's List 2023, 2024, 2025

Leadership & Co-Curricular Activities

Deputy Director Design – Humun VIII

Graphic Designer – Arzu Anthology VII
Design Lead,
Arts And Culture Club

Design,
Multiverse Club

Employment Experience

Software Engineer (Gen AI and LLMs)
Intern,
Data Science Dojo
(March – June 2026)

Teaching Assistant,
Habib University
(August 2023 – April 2026)

Undergraduate Researcher,
Habib University
(June – August 2025)

Undergraduate Researcher,
Habib University
(June – August 2024)

Final Year Project

Quadruped Locomotion in Rough Terrain and Confined Environments

Legged robots, in contrast to wheeled robots, have the added benefit of legged locomotion, allowing them to tackle different terrains (caves, tunnels, and rubble) that a wheeled robot cannot. Using a hobby-grade quadruped robot, we augmented it with mounts for our compute modules and sensors to obtain feedback required for robust locomotion. For locomotion in rough terrain, we tested classical control, learning-based approaches, and evolutionary algorithms. To allow the robot to navigate through confined spaces, we used a depth camera for perceiving the immediate terrain and deciding on a posture to constrain the locomotion algorithms to minimize collisions. Thanks to our simulation package, we were able to rapidly test and evaluate our algorithms virtually and physically using a testbed.

Publications, Creative Projects & Global Experiences

Research Paper – Explainable Multi-Crop Plant Disease Classification via a Two-Stage Multimodal Vision Transformer (in review)

Research Paper – Zero-Shot Concrete Crack Segmentation using Multichannel Fusion (working on publication)

Research Paper – Prompt-Based Music Recommendation (showcased in Summer Tehqiq Research poster presentations)

Research Paper – LLMs for Sentiment Analysis in Petrol Price Videos (showcased in Summer Tehqiq Research Program poster presentations)





S. SAMAH DANIYAL

BS Computer Science

✉ samah.daniyal@gmail.com

☎ +923353894249 LinkedIn

"I am driven by AI/ML and Data Science to solve complex problems. I aim to pursue impactful professional roles in machine learning and predictive analytics."

Core Skills

- Data Analysis & Visualization
- Large Language Models (LLMs)
- Python
- PostgreSQL/MS SQL Server
- PyTorch

Core Competencies

Agility; Collaborates Openly; Strategic Thinking

Academic Awards

Dean's List 2025

Leadership & Co-Curricular Activities

Participated In Texas A&M's Invent For The Planet 2025

TA - Linear Algebra & Data Structures And Algorithms

Volunteered - Wintercamp'22 Workshop, Wise (Women in Science and Engineering)

Pr Lead,
Computer Science And Engineering Club
Event Manager (PR Team),
Computer Science And Engineering Club

Employment Experience

Campus Ambassador - Graduate Trainee Program, Salesflo
(January – March 2026)

AI Data Analyst Intern, Excelerate
(October – November 2025)

Undergraduate Research Assistant, Habib University
(June – August 2024)

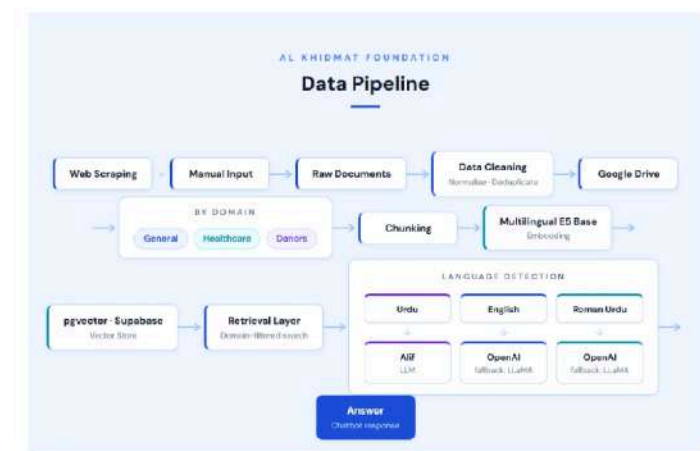
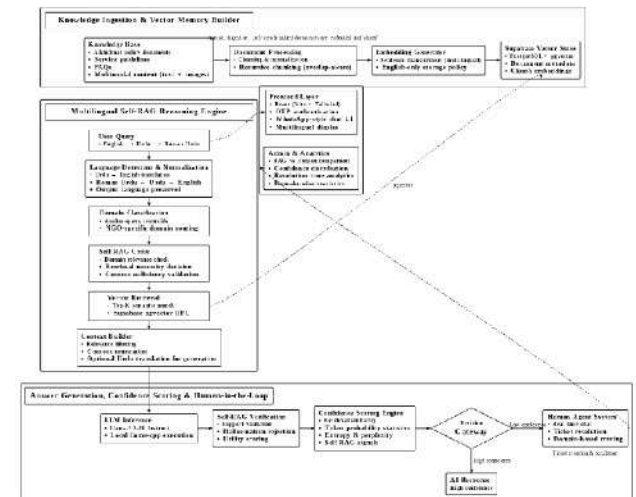
Final Year Project

AI Khidmat Public Chat Portal

The AI-powered multilingual chat portal for Alkhidmat Foundation addresses manual query-handling delays by providing a centralized, inclusive solution. Using a Self-RAG (Retrieval-Augmented Generation) and Agentic AI pipeline, it automates responses for donor, healthcare, and general domains in English, Urdu, and Roman Urdu. The system utilizes multilingual-e5-base embeddings and pgvector for semantic search, with OpenAI and Alif for generation. To ensure accuracy, it employs a domain classification and confidence scoring engine that fuses retrieval quality with token probability. Key benefits include 24/7 accessibility for underserved communities, reduced staff workload, and automatic human-agent escalation for complex queries. Moreover, there is a dedicated admin dashboard to view LLM analytics and update the RAG Knowledge Base.

Publications, Creative Projects & Global Experiences

Research Paper – Research Project Poster on Data Visualization of "Data Analysis Across Boundaries" accepted in the International IEEE VIS Conference 2025.





S. WANIA HUSSAIN

Ismat & Mustafa Kassam HU TOPS Scholar

BS Computer Science

Religious Studies

✉ s.waniahussain@gmail.com

☎ +923269245479  LinkedIn

"I am a final-year Computer Science student passionate about Python, data science, natural language processing, and software development. I enjoy building projects and applying my skills to real-world solutions."

Core Skills

- C++
- Data Analysis
- Natural Language Processing
- Python
- SQL

Core Competencies

Drive for Results

Leadership & Co-Curricular Activities

HUMUN- Director Registrations

Bazm-E-Aqeedat Volunteer

Logistics And Operations Member,
Araish - E - Khayal

Employment Experience

UBL,
Intern
(July – August 2024)

Final Year Project

Safe-Karachi

Safe-Karachi is a mobile-first platform designed to help people navigate Karachi more safely. The system collects and analyzes information from community reports, social media, and news sources to identify safety risks in different areas of the city. Using natural language processing and data analysis, the platform identifies areas with reported safety concerns and uses this information to suggest safer travel routes. The application then provides users with route suggestions that prioritize safer paths instead of only the fastest routes. The goal of this project is to improve public awareness of safety conditions and support informed travel decisions within the city.





S. YASHFEEN ZEHRA ZAIDI

Ismat & Mustafa Kassam HU TOPS Scholar

BS Computer Science

 yashfeen.s3018@gmail.com

 +923032887827  LinkedIn

"I have been very interested in AI, particularly bioinformatics, and therefore would love to work in this field upon graduation."

Core Skills

- Competitive Programming
- Data Science
- Python
- Sql

Academic Awards

Dean's List 2024, 2025

Hutops Scholar

President's List 2025

Leadership & Co-Curricular Activities

Treasurer,
HUAIC Chapter

Competitive Programming Lead,
Wise (Women in Science and Engineering)

Employment Experience

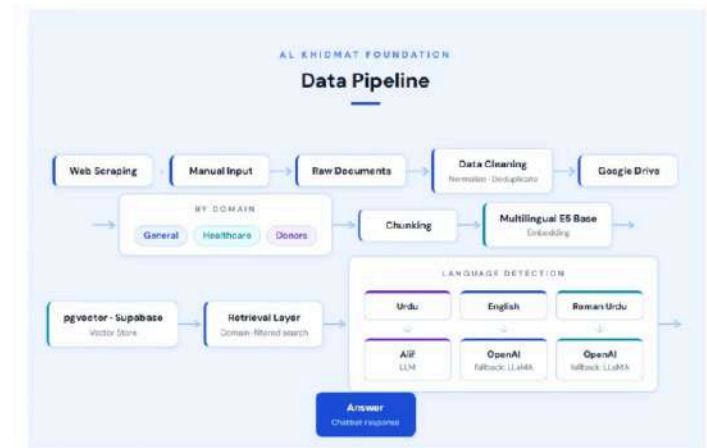
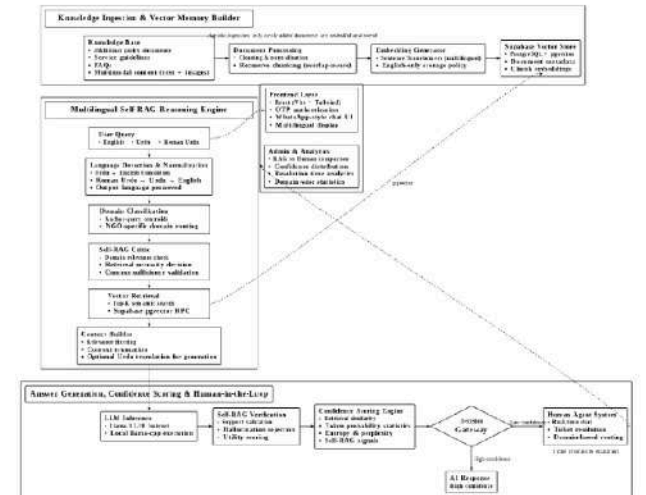
Research Assistant,
Habib University
(June – September 2024)

Undergraduate Researcher,
Habib University
(June 2023 – June 2024)

Final Year Project

AI Khidmat Public Chat Portal

We are developing an external AI-powered chatbot for Alkhidmat Organization designed to handle user queries while reducing the manual workload on NGO staff. The system covers three core service domains: Healthcare, Donations, and General Inquiries. The chatbot incorporates a human-in-the-loop mechanism, where queries that fall below a defined AI confidence threshold are automatically escalated and routed to live human staff for handling. An admin dashboard is included to provide organizational oversight, displaying key metrics such as the volume of AI-resolved queries versus human-handled ones. The solution is multimodal (supporting both text and image inputs) and multilingual, with support for English, Urdu, and Roman Urdu to ensure accessibility across diverse user demographics.





TAHA J. MUNSHI

BS Computer Science

 tahamunshi3@gmail.com

 +923322162555  LinkedIn

"Going into the market and exploring my interests."

Core Skills

- Docker
- Jupyter Notebook
- Python

Core Competencies

Agility

Employment Experience

Salsoft Technologies,
Project Management Intern
(June – August 2025)

Final Year Project

VenueVision

A 2D/3D space remodeling and designing app, aimed toward event hall vendors.





TAHA MUNAWAR
BS Computer Science

 tahamunawar16@gmail.com

 +923095002087  LinkedIn

*"I want to engineer reliable, scalable systems
and look forward to working as a Backend
Engineer."*

Core Skills

- Azure
- Graph
- Lang
- Python
- React
- SQL

Academic Awards

Dean's List 2025

President's List 2025

Employment Experience

Software Engineer Intern – Backend,
Data Science Dojo
(March – June 2026)

Software Engineer Intern – Frontend,
Securiti.ai
(June – August 2025)

Teaching Assistant – Calculus 1,
Habib University
(September – December 2024)

Undergraduate Research Assistant,
Habib University
(June – August 2024)

Final Year Project

AI Operations Agent for Payment Systems

This project developed an AI Operations Agent for TPS to automate incident resolution in high-stakes payment systems. By orchestrating LangGraph with a human-in-the-loop design, the agent automates the entire lifecycle from log parsing to Pull Request creation. The technical core is a Hybrid RAG system (BM25 + FAISS) that maps complex transaction errors to source code with high precision using GPT-4o. Built on a high-concurrency FastAPI backend with WebSockets, it provides real-time visibility into the agent's reasoning. The primary benefit is a drastic reduction in Mean Time to Repair (MTTR). By automating routine debugging, the system increases operational efficiency, minimizes financial risk from downtime, and frees engineers from manual log analysis.

**Publications,Creative Projects &
Global Experiences**

Publication – Graph Data Science for Bibliographic Data: A Case of Migration Studies Data published in Complex Networks & Their Applications XIII in April 2025





TURAB H. USMANI

BS Computer Science

✉ turabofficial2003@gmail.com

☎ +923352591083  LinkedIn

"Driven by AI research and robotics, I want to pursue a master's in autonomous systems to become a lead AI systems architect, building high-performance infrastructure for AI/Edge AI."

Core Skills

- Bash
- C++
- C#
- Docker
- Express
- Git
- Godot
- Huggingface
- JavaScript
- Linux
- MongoDB
- Node.js
- Python
- PyTorch
- React ROS2
- SQL
- Unity

Core Competencies

Acts with Ownership; Adaptability;
Collaborates Openly; Planning; Problem
Solving; Takes Initiative

Employment Experience

Research Assistant,
Habib University
(May – August 2025)

Teaching Assistant – Calculus 2,
Habib University
(January – April 2025)

Teaching Assistant – Calculus 1,
Habib University
(August – December 2024)

Final Year Project

Alops – Agentic AI for Payment Switch Systems

My project leverages Agentic AI and LangGraph to transform traditional monitoring into an autonomous, self-healing framework. Designed for high-stakes financial environments, the project aims to replace manual triaging with a multi-agent system capable of real-time log analysis, database optimization, and code review. The purpose is to move beyond static, rule-based alerts toward GenAI-driven reasoning that diagnoses and remediates system failures independently. By deploying specialized agents to handle complex operational tasks, the system drastically reduces Mean Time to Resolution (MTTR) and enhances infrastructure reliability. The primary benefit is a scalable, intelligent automation layer that ensures 24/7 stability for payment switches, redefining how we manage and secure enterprise-scale digital ecosystems through the intersection of DevOps and Generative AI.

Publications, Creative Projects & Global Experiences

Publication – https://ceur-ws.org/Vol-4038/paper_73.pdf





UMAR K. THANVI

BS Computer Science

✉ umarkashifthanvi@gmail.com

☎ +923402341273  LinkedIn

"I am passionate about using AI to solve high-impact problems and disrupt traditional industries. I thrive in fast-paced, rigorous environments that offer autonomy and reward bold and creative ideas."

Core Skills

- Excel
- Figma
- Python
- SQL

Employment Experience

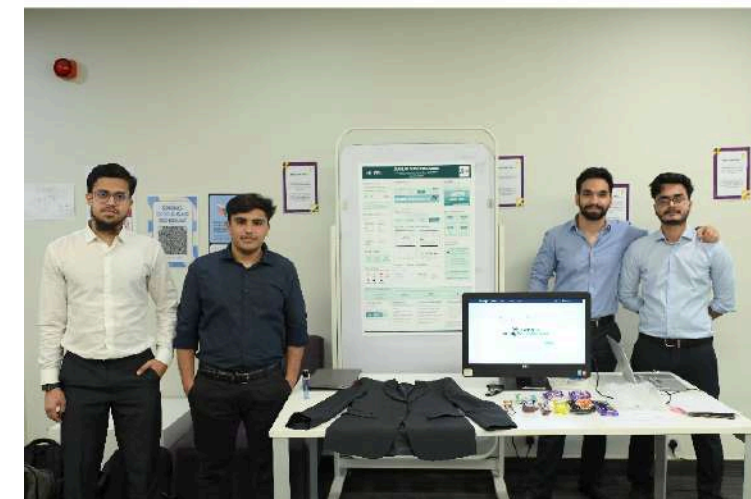
Junior Qa Analyst,
Contour Software
(March – September 2026)

Product Intern,
Qordata
(August – December 2025)

Sales and Data Analytics Intern,
Nestle
(July – September 2024)

Final Year Project

ZaraiLink – Find the Right Trade Partners
Faster International trade runs on trust and information, but both are hard to come by. Exporters waste weeks chasing buyers with no idea who's actually importing their product. Importers overpay because they have no visibility into real market prices. ZaraiLink solves this by transforming Pakistan's customs records into a live trade intelligence platform. Search for any product and see verified suppliers or buyers ranked by price, volume, and reliability, backed by real shipment data. Know the fair market price before you negotiate, identify untapped export markets before your competitors do, and evaluate any trade partner's history in seconds instead of weeks. For importers, exporters, and trade professionals, it makes international trade transparent and efficient.





ZAIN HATIM

BS Computer Science

✉ zain.h.machiyara@gmail.com

☎ +923212332446  LinkedIn

"I am excited to work in the backend and software development field."

Core Skills

- C++

Core Competencies

Agility; Drive for Results; Takes Initiative

Employment Experience

Lucky Cement,
IT Intern
(May – July 2024)

Final Year Project

Code School

TeachWise, a web-based intelligent Classroom Management System that centralizes instructor and class operations into a single platform. TeachWise replaces manual workflows with automated, AI-driven processes for scheduling and performance evaluation. The system integrates Zoom-based class delivery and provides real-time dashboards for instructors and administrators, enabling efficient, scalable, and data-driven management of digital learning—alongside our partner CODESCHOOL.





ZOHAIB ASLAM

BS Computer Science

✉ zohaib.aslam03@gmail.com

☎ +923332876697  LinkedIn

"Specializing in Data Science and Machine Learning, my background spans industry internships and academic research. I am passionate about leveraging data to build intelligent, scalable AI solutions."

Core Skills

- Hugging Face Transformers
- Pandas
- Python
- Scikit-Learn
- TensorFlow

Core Competencies

Acts with Ownership; Adaptability; Effective Presentation Skills; Encourages Innovation; Problem Solving; Takes Initiative

Leadership & Co-Curricular Activities

Career Fair – Volunteer

Employment Experience

Data Science Intern,
10Pearls
(September – November 2025)

Python Developer Intern,
VentureDive
(June – August 2024)

Final Year Project

AI-Powered Predictive Maintenance System for K-Electric

My Final Year Project focuses on Predictive Fault Management for Karachi's power distribution networks, aimed at shifting operations from reactive repairs to proactive maintenance. The system features a machine learning solution designed to predict fault types and restoration times. A key innovation involves integrating non-technical loss data, such as electricity theft, alongside weather and traffic variables to accurately model infrastructure stress. Supported by an automated data pipeline using Feast and GitHub Actions, this system is built to optimize resource allocation, significantly reduce operational downtime, and provide data-driven intelligence for a critical metropolis.

Publications, Creative Projects & Global Experiences

Research Paper – Research Paper on Automating ROP Diagnosis and Severity with Deep Learning published in IEEE HONET 2025



BS

ELECTRICAL ENGINEERING



M. BILAL QURESHI

BS Electrical Engineering

✉ mbilalqureshi100@gmail.com

☎ +923363739389  LinkedIn

"I am deeply interested in automation and artificial intelligence. I leverage robotics through my capstone on autonomous vehicles, while possessing knowledge in deep learning and LLMs enhanced by various projects."

Core Skills

- C/C++
- Deep Learning
- Matlab and Simulink
- Python
- Robotic Operating System (ROS2)

Core Competencies

Adaptability; Planning; Strategic Thinking;
Takes Initiative

Academic Awards

Dean's List 2023, 2025

Leadership & Co-Curricular Activities

President,
IEEE (Institute of Electrical and Electronics Engineers)

Academic Affairs Representative,
Habib University Student Government

Employment Experience

Tutor,
Epsilon Academy
(September 2022 – May 2026)

Teaching Assistant – Systems
Engineering and Project Management,
Habib University
(September 2025 – December 2025)

Research Intern,
Indus Motor Company Ltd
(June – August 2025)

Teaching Assistant – Computer
Architecture,
Habib University
(September – December 2024)

Final Year Project

Autonomous Tow Truck – Enhanced Safety and Obstacle Detection

Autonomous tow truck for IMC – Toyota. We started with systems engineering to analyze use cases and determine the optimal design for the vehicle. Our software implementation leverages Autoware, which is built on the ROS2 framework with visualization on RViz, and we use Docker to maintain consistent development environments. Throughout the project, continuous use of Git ensures proper teamwork and a reliable version history. A critical component of my part is the integration of Hardware-in-the-Loop (HIL). On the sensor front, I integrated a Livox MID360 3D LiDAR with Autoware. This setup enabled the successful implementation of the Normal Distributions Transform (NDT) algorithm to achieve accurate spatial localization for the autonomous system.





MYSHA

Ismat & Mustafa Kassam HU TOPS Scholar

BS Electrical Engineering

✉ mysha.zhali8@gmail.com

☎ +923069497749  LinkedIn

"I am passionate about building systems that scale: from cloud networking and automation pipelines to academic research workflows. Highly motivated to apply CV, AI, and robotic technologies to sustainability-focused domains."

Core Skills

- Autoware
- C++
- Matlab/Simulink
- Nav2
- Python
- ROS2

Core Competencies

Acts with Ownership; Adaptability;
Collaborates Openly; Takes Initiative

Leadership & Co-Curricular Activities

Deputy Director General

Curriculum Lead

Project Lead,
Gaming Club Habib Debate Union

Food & Hygiene Cabinet Member,
Habib University Student Government

Emerge - Mentor,
Young Leaders Club

Employment Experience

Teaching Assistant,
Habib University
(August – November 2025)

Teaching Assistant,
Habib University
(August – November 2025)

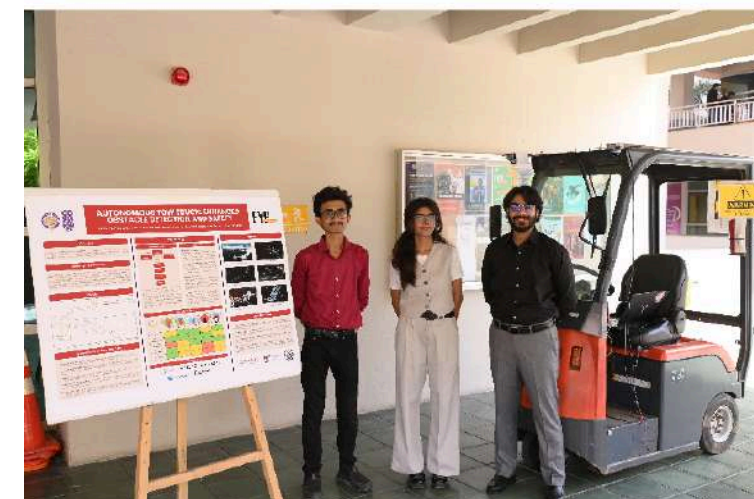
Intern,
AKUH - Aspire Internship
(June 2025 – August 2026)

Undergraduate Researcher,
Summer Takhleeq Research Programme
(June 2025 – August 2026)

Final Year Project

Autonomous Tow Truck - Enhanced Safety and Object Detection

Toyota Indus Motor Company is encountering logistical challenges in the internal transportation of car parts within its factory, and the current partially automated tow truck lacks reliable lateral and rear/lateral obstacle awareness and short-horizon prediction, creating blind-spot safety risks, especially with multi-trailers. We must design, implement, and validate an integrated, regulation-compliant 360° perception prediction control stack, which includes multi-sensor fusion and predictive planning that detects lateral/rear hazards in real time and executes collision-free maneuvers, fixing current blind-spot and prediction gaps for production deployment. Furthermore, we aim to enhance the localization capabilities of the tow truck so it can identify where it is in its environment.





NAHYAN J. EJAZ AKHTAR

Hilton Pharma Merit Scholar

BS Electrical Engineering

✉ nahyanjaved1996@gmail.com

☎ +923312139873  LinkedIn

"Passionate about the intersection of AI and telecommunications, I aim to leverage my background in machine learning and network systems to build intelligent, innovative connectivity solutions for the future."

Core Skills

- Data Analysis & Visualization
- FPGA & SoC Implementation
- IoT & Cloud Integration
- Machine Learning
- Network Simulation & Configuration
- Python Programming

Core Competencies

Drive for Results; Planning; Takes Initiative

Leadership & Co-Curricular Activities

EE Representative
Member,
Entrepreneurship Club

Employment Experience

Student Researcher,
Summer Tehqeeq Research Program –
Student Researcher
(June – August 2025)

HBL,
Compliance Automation
(July – August 2024)

Final Year Project

Car Crash Detection Using Acoustic Signature

This project aims to enhance road safety and accelerate emergency response times by developing an automated car crash detection system based on acoustic signatures. Utilizing a machine learning approach, the system processes audio data such as collisions, skids, and ambient background noise and converts it into spectrogram images. An RNN-LSTM model is then trained to accurately classify these acoustic events, reliably distinguishing actual crashes from normal traffic sounds. To enable real-time, low-latency detection at the edge, the architecture is planned for hardware deployment on a Zynq SoC platform. By instantly identifying accidents the moment they occur, this system provides a critical solution to reduce emergency dispatch delays and improve outcomes in life-threatening situations.

Publications, Creative Projects & Global Experiences

Research Paper – Biosensing-Driven Framework for Assistive Therapy: A Proof-of-Concept Study (2nd IEEE Karachi Humanitarian Technology Conference (KHI-HTC) 2026) (Under-Review)

Research Paper – BiLSTM-Based Sequential Acoustic Crash Detection for Urban Road Safety (2nd IEEE Karachi Humanitarian Technology Conference (KHI-HTC) 2026) (Under-Review)

Research Paper – HU at SemEval Task 10: Psycholinguistic Extraction and Classification for Conspiracy Narratives (SemEval 2026) (Under Review)





SHAHMIR M. CHAUDHRY

BS Electrical Engineering
Computer Science

✉ shahmirmustafa02@gmail.com

☎ +923390077069  LinkedIn

"My interests lie in research and development in the domain of medical imaging: leveraging AI for effective diagnostics, improving acquisition methods, and identifying patterns across diseases to improve prognosis."

Core Skills

- Data Science
- Image Processing
- Python
- Signal Processing
- Deep Learning

Leadership & Co-Curricular Activities

Student Ambassador

Basketball Team Member,
Sports & Recreational Club

Vice President,
IEEE (Institute of Electrical and Electronics Engineers)

Employment Experience

Computer Vision Engineer,
Lambda Theta
(March – May 2026)

Teaching Assistant,
Habib University
(January 2024 – April 2026)

Intern,
HBL
(December 2024 – January 2025)

Design Engineer,
Data Essentials
(May 2023 – January 2024)

Final Year Project

A Gamified Physiotherapy Ecosystem

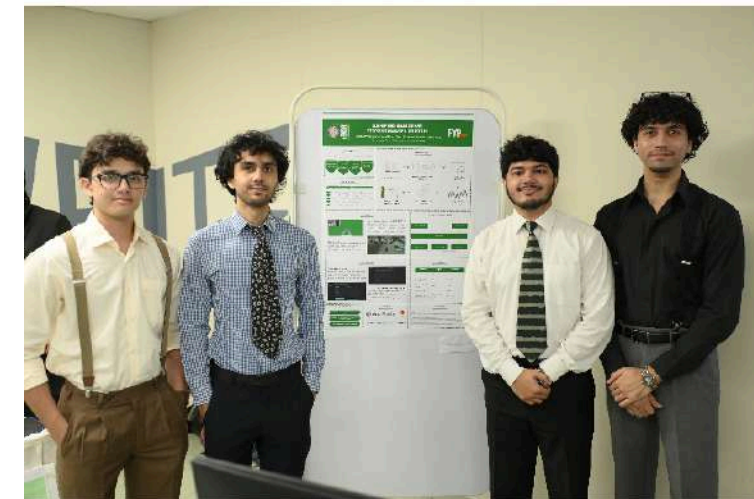
Rehabilitation is a critical component of recovery for individuals with injuries, neurological disorders, or post-surgical conditions. However, traditional rehabilitation methods often suffer from low patient engagement, resulting in reduced adherence and slower recovery. This project introduces a gamified rehabilitation platform designed to enhance motivation and provide real-time progress tracking through advanced 3D motion capture and biofeedback technologies. Utilizing deep learning models for pose estimation (MediaPipe) integrated with RGB-D depth sensor cameras (e.g., Intel RealSense) for true real-world metric tracking, the platform precisely assesses key physical movements.

Publications, Creative Projects & Global Experiences

Research Paper – "Biosensing-Driven Framework for Assistive Therapy: A Proof-of-Concept Study" published in IEEE Xplore

Research Paper – "HU at SemEval Task 10: Psycholinguistic Extraction and Classification for Conspiracy Narratives" published at ACL 2026

Exchange Program – Berkeley Learn Abroad Semester (Fully Funded)





SYED A. NISAR SHAH

BS Electrical Engineering

 ali.nisar.s@outlook.com

 +923352711900  LinkedIn

"Electrical engineer driven by building intelligent systems, robotics, and custom hardware/software. Focused on AI, automation, and scalable products, aiming to create and help ventures while pushing technical and personal limits."

Core Skills

- C++ (MCU Firmware and High-Level Control)
- Mechanical and Electrical: Hvac Design, Sensor Integration, 3D Printing
- Python (LangChain Platforms, Opencv, Pytorch, Tensorflow, Keras)
- React
- React Native
- Robot Operating System 2 (Ros2) (Python & C++)
- Tauri
- Vite

Leadership & Co-Curricular Activities

Invent for the Planet 2024, France (2nd Runner Up) – Team Lead

Faysal Bank Innovation Hackathon 2024 (Winner) – Team Lead

Farm Robotics Challenge 2025 – Team Lead

Treasurer,
Computer Science and Engineering Club

Employment Experience

Design And AI Intern,
Designist
(December 2025 – January 2026)

Technical Ice And Hybrid Automobile Intern,
Toyota Southern Motors
(July – August 2023)

Final Year Project

Developing a Robust Vision System for Autonomous Tow Truck Navigation

The primary objective of this project was to transform Toyota Indus Motor Company's (IMC) in-house tow trucks into fully autonomous vehicles, enhancing logistical efficiency by enabling them to transport vehicle components from various workshops to the main assembly point independently. Our team focused on designing a robust vision system that powers the autonomous software stack, leveraging cameras and LiDAR sensors for obstacle detection, avoidance, and improved localization, ensuring safe navigation and heightened environmental awareness. Key outcomes of this initiative include a successful retrofit of an IMC tow truck with an autonomous system capable of self-navigation and dynamic path planning. This project not only optimizes IMC's operational workflow but also represents a significant step forward for industrial automation in Pakistan.

Publications, Creative Projects & Global Experiences

Research Paper – RF Modulation Classification Using Software Defined Radio (SDR) and Deep Learning (Under publication process)





S. SHAHEER ABBAS RIZVI

BS Electrical Engineering

✉ shaheerabbas2503@gmail.com

☎ +923223503267  LinkedIn

"Electrical Engineer passionate about robotics, autonomy, and intelligent systems. Aspiring researcher pursuing graduate studies in control, perception, and AI, with a focus on building systems that think, see, and move."

Core Skills

- C/C++
- Matlab/Simulink
- PCB Design
- Python
- Ros 2

Core Competencies

Acts with Ownership; Collaborates Openly;
Drive for Results; Effective Presentation Skills;
Encourages Innovation; Planning; Problem
Solving; Strategic Thinking

Academic Awards

Dean's List 2023, 2024, 2025

High Achievement Scholarship 2023,
2024, 2025

President's List 2023, 2025

Leadership & Co-Curricular Activities

Member Of Academic Affairs Cabinet,
Habib University Student Government

Treasurer,
Philosophy Club

Member Of Content Team,
Multiverse Club

Employment Experience

Intern,
FarmEvo Technologies
(March – May 2026)

Student Researcher,
Habib University
(September 2025 – April 2026)

Student Researcher – Music
Recommendation System,
Habib University (Tehqiq Program)
(May – August 2025)

Teaching Assistant – Signals and
Systems,
Habib University
(January – April 2025)

Final Year Project

Gantry Robot for Packaging and Palletizing of Microwaves

Dawlance's microwave line requires workers to manually lift up to 40 kg in a 30-second cycle, yielding a NIOSH Lifting Index of 3.1; this is well above the safe limit of 1.0 and mandates immediate redesign. Hence, this project designs and validates a 4-axis human-robot collaborative gantry system that automates heavy lifting and stacking, reducing the Lifting Index below 1.0 and cycle time below 25 seconds. Major deliverables include a functional prototype utilizing hardware ready for production, a vision-guided control architecture, a full mechanical and electrical design package for steel fabrication, and a maintenance manual for Dawlance.





ZAID B. KHALID

BS Electrical Engineering

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"I am pursuing roles at the intersection of product and technology, ideally at startups where I can grow from a technical contributor to someone shaping what gets built and why."

Core Skills

- Agentic AI & Automation
- Artificial Intelligence
- Data Science
- Machine Learning & Deep Learning
- Python
- Robotics & Embedded Systems

Core Competencies

Adaptability; Collaborates Openly; Drive for Results; Effective Presentation Skills; Encourages Innovation; Planning; Problem Solving; Takes Initiative

Leadership & Co-Curricular Activities

Event Lead,
IEEE (Institute of Electrical and Electronics Engineers)

Treasurer,
Math Club

Employment Experience

Teaching Assistant – Calculus I, Habib University
(September – December 2024)

Summer Tehqeeq Student Researcher, Habib University
(June – August 2024)

Peer Tutor For Calculus II, Habib University
(February – April 2024)

Teaching Assistant For Calculus I, Habib University
(August – December 2023)

Final Year Project

Real-Time Car Crash Detection Using Acoustic Signatures

Road traffic accidents claim 1.19 million lives annually, with delayed emergency response being a critical contributing factor. This project develops a passive acoustic vehicle crash detection and localization system intended for deployment on embedded hardware in low-resource urban environments. In the first phase, three audio classification approaches were evaluated — a Bidirectional LSTM, an SVM with Bag of Aural Words, and a Gaussian Naive Bayes classifier — with the BiLSTM achieving 97.14% accuracy and 98.5% crash recall. The ongoing second phase focuses on two objectives: implementing the detection pipeline on a Xilinx Zynq-7000 FPGA for real-time embedded inference and developing an acoustic localization algorithm to estimate crash coordinates for first responders, completing a fully deployable crash notification system.

Publications, Creative Projects & Global Experiences

Conference Presentation – Zaid Bin Khalid, Nahyan Javed, Farhan Khan. "BiLSTM-Based Sequential Acoustic Crash Detection for Urban Road Safety". IEEE Karachi Humanitarian Technology Conference (KHI-HTC), 2026. (Conference Paper Under Review)

Publication – "Acoustic Car Crash Detection Using Audio Classification". DURS, Habib University, 2026. (Abstract Under Review)

