

MARIA SULTAN

Rawalpindi | sultanmaria940@gmail.com

<https://github.com/MariaSultanBahoo>

SUMMARY

Software Engineering student with hands-on experience in AI, web development, and embedded systems. Currently interning at a government R&D organization, working with deep learning, LLMs, and RAG systems. Built projects like a disease hotspot predictor using Django and autoencoders, and a real-time sign language converter with ESP32-CAM and OpenCV. Skilled in Python, TensorFlow, Pandas, and Django. Passionate about learning through practical projects and building meaningful, data-driven solutions.

PROJECTS

Infectious Disease Prediction & Hotspot Analysis

Nov 2024 - Jan 2025

- Developed a Django-based web app to predict disease hotspots using an unsupervised autoencoder model.
- Applied the Apriori algorithm for association rule mining to uncover patterns in disease spread.
- Built a user-friendly interface to input data and visualize hotspot predictions and related insights.
- **Tools and Technologies:** Python, TensorFlow, Pandas, Django, HTML/CSS, Autoencoder, Apriori

Volatile Data Saving from Windows

J 2025 - June 2025

- Investigated how sensitive data (like login credentials) remains in RAM after use in Windows-based systems.
- Used tools like Process Hacker and Volatility to capture and analyze memory dumps.
- Identified cryptographic vulnerabilities and proposed protection mechanisms for secure memory handling.
- Focused on RAM forensics, vulnerability assessment, and designing low-complexity protective measures.
- **Tools & Technologies:** Volatility, Process Hacker, Python, Windows OS.

Real-time Sign Language Recognition with ESP32-CAM & OpenCV

April 2025 - May 2025

- Designed a real-time system using ESP32-CAM and OpenCV to capture and classify hand gestures representing sign language.
 - Built a Tkinter-based GUI to display recognized gestures as text on a local PC using serial communication.
 - Implemented image processing and gesture classification pipeline over Wi-Fi streaming.
 - **Tools & Technologies:** ESP32-CAM, OpenCV, Python, Tkinter, Serial Communication.
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EDUCATION

Bachelor of Science in Software Engineering

Nov 2022 - Present

Fatima Jinnah Women University, The Mall Road, Rawalpindi

- CGPA: 3.45

Intermediate in Computer Science

July 2020 - July 2022

Global College System, Harley Street, Rawalpindi

- Percentage: 84

Matriculation in Computer Science

Oct 2017 - July 2020

F.G Girls Public High School, Lalazar, Rawalpindi

- Percentage: 86
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SKILLS SUMMARY

- AI
 - Python
 - DSA
 - OOP
 - C++
 - My SQL
 - Java-SpringBoot Framework
 - HTML / CSS / JS
 - OpenCV
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CERTIFICATIONS

- Basics of Python Programming (OpenWeaver)
 - Decoding AI: A Deep Dive into AI Models and Predictions (Coursera)
 - Basics of HTML/CSS (OpenWeaver)
 - Basics of DataScience (Cambridge International Qualifications)
 - Python Essentials (CISCO Networking Academy)
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LEADERSHIP & COMMUNITY ENGAGEMENT

- **Cofounder, Youth Empowerment:** Led community initiatives to inspire and mentor young individuals in technology.
- **BETA MLSA, Microsoft :** Represented Microsoft Learn Student Ambassadors, facilitating collaboration and knowledge-sharing among students in the tech community.
- **Volunteer, Dev Jirga:** Contributed to the growth of the developer community by organizing events and supporting knowledge-sharing initiatives.