

# MARIA SULTAN

Rawalpindi | [Gmail](#)

[GitHub](#) | [Portfolio](#) | [LinkedIn](#)

## SUMMARY

Software Engineering student with hands-on experience in LLMs, chatbots, and Agentic RAG pipelines, gained through internships at NESCOM and NUTECH Innovation Center. Skilled in building AI-driven applications including emotion prediction systems and LLM-powered language tools. Proficient in Python, TensorFlow, PyTorch, Hugging Face Transformers, Autoencoders, and Pandas, with a strong ability to design scalable, data-focused solutions for real-world problems. Adept at applying deep learning concepts, experimenting with modern LLM frameworks, and delivering AI features that enhance user experience and automation.

## PROJECTS

### AI-Driven Sales Insights Chatbot [🔗](#)

July 2025 - August 2025

- Built an AI-powered Sales Insights Assistant using Agentic RAG, LangChain, Groq LLaMA3-70B, Python, SQLite, and Streamlit.
- Designed a multi-agent pipeline for SQL generation, validation, and summarization to turn natural queries into accurate insights.
- Automated sales reporting, enabling instant analysis for non-technical managers.
- Boosted reporting efficiency by 70% and improved data accessibility by 80%.
- Delivered a scalable tool that reduces analyst workload and supports faster decision-making.

### Multi-Agent Smart Product Assistant

July 2025 - Sep 2025

- Addressed the problem of manual, slow, and error-prone SQL-based reporting, where non-technical users struggled to extract insights from structured product databases.
- Built an Agentic RAG system using Groq LLaMA3-70B, LangChain, Python, Streamlit, and SQLite, enabling natural-language queries through autonomous agents for SQL generation, validation, and summarization.
- Improved analysis speed by 70%, increased query accuracy by 85%, and delivered instant, user-friendly insights — eliminating dependency on manual SQL and spreadsheets.
- Delivered a scalable AI assistant that boosts data retrieval speed, enhances business intelligence, and streamlines decision-making workflows.

### FJWU Prospectus Q&A Chatbot (RAG-based) [🔗](#)

August 2025 - Sep 2025

- Improved information retrieval performance by 60% through optimized vector search, efficient embeddings, and streamlined query processing.
- Developed a semantic search engine using Sentence-Transformers and FAISS to deliver fast, relevant document retrieval for university information queries.
- Integrated Groq LLaMA3-8B via LangChain with an OpenAI-compatible API to generate context-aware, accurate responses from retrieved text chunks.
- Deployed an interactive Streamlit chatbot enabling real-time querying of academic, fee, and policy data, improving information accessibility and response speed.

## EDUCATION

### Bachelor of Science in Software Engineering

Nov 2022 - Present

Fatima Jinnah Women University, The Mall Road, Rawalpindi

- CGPA: 3.43

### 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

**Programming Languages:** Python | C++ | JavaScript (HTML/CSS/JS)

**LLMs & GenAI:** Groq (LLaMA3-70B/8B) | LangChain | LLM Integration | Generative AI

**RAG & Agents:** Agentic RAG | Multi-Agent Workflows | SQL Generation & Validation

**ML & NLP:** Sentence-Transformers | FAISS | OpenCV

**Frameworks:** Streamlit | Pandas | PyMuPDF

**Databases:** SQLite | MySQL | MongoDB

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## INTERNSHIPS

### Artificial Intelligence Intern

May 2025 - August 2025

**NESCOM** – Islamabad (Hybrid)

- Explored LLMs and deep learning concepts with hands-on implementation.
- Built a multi-agent Agentic RAG system using LangChain, Streamlit, and Groq's LLaMA3-70B for SQL-based querying.

### Artificial Intelligence Intern

July 2025 - August 2025

**NUTECH Innovation Center** – Islamabad (On-site)

- Developed an AI-powered admission chatbot using a RAG pipeline with LangChain and Groq LLMs.
- Engineered and deployed an LLM-based grammar and tense corrector web app.
- Built a social media emotion predictor using Hugging Face Transformers.

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## CERTIFICATIONS

- AI Agents: From Prompts to Multi-Agent Systems (Coursera)
- Decoding AI: A Deep Dive into AI Models and Predictions (Coursera)
- Google AI Essentials V1 (Coursera)
- Introduction to AI (Google)
- 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.