

M. Usman Tariq

Islamabad, Pakistan — +92 331 574 7244 — m.usmantariq124@gmail.com
linkedin.com/in/m-usman-tariq-6581b022 — github.com/usman78654

Summary

Software Engineering undergraduate specializing in secure full-stack development, distributed backend systems, Artificial Intelligence, and cloud deployment. Experienced with FastAPI, Docker, Kubernetes, AWS, CI/CD, Linux, APIs, data automation, and real-time applications. Currently working as a Software Engineer at Huawei, developing KPI-driven dashboards and intelligent automation for nationwide telecom operations. Interested in Cloud Engineering, DevOps, DevSecOps, observability, and reliable production systems.

Education

FAST National University of Computer and Emerging Sciences **Islamabad, Pakistan**
Bachelor of Science in Software Engineering *2022 – 2026*

Army Public School / Fazaia College **Islamabad, Pakistan**
Higher Secondary School Certificate *2020 – 2022*

Technical Skills

Cloud and DevOps: AWS, Docker, Kubernetes, GitHub Actions, CI/CD, Linux, Shell Scripting, Terraform, Prometheus, Grafana

Programming: Python, Java, JavaScript, C++, C#, SQL, HTML/CSS

Backend and Web: FastAPI, Node.js, Express, React, MERN Stack, Socket.IO, Firebase, Streamlit, Web Crypto API

AI and Data: PyTorch, LangChain, HuggingFace, FAISS, RAG, NLP, Computer Vision, Signal Processing, KPI Development, Data Automation

Databases and Tools: PostgreSQL, MongoDB, SQLite, Redis, JUnit, Wireshark, Packet Tracer, Jira, Figma

Languages: English fluent, Urdu fluent, German basic

Work Experience

Huawei Technologies **Islamabad, Pakistan**
Software Engineer *2026 – Present*

- Developed 10+ KPI-driven dashboards for monitoring nationwide telecom sites, consolidating daily alarm, VLAN, cell, software, and hardware data into structured operational views.
- Reduced network-data interpretation time from approximately 1–2 hours to a few clicks, enabling teams to identify site issues, performance trends, and abnormal conditions more efficiently.
- Automated recurring Excel-based data-processing and analysis workflows, reducing manual comparison and improving the accessibility of operational information.
- Built context-aware chatbot and API capabilities into dashboards, enabling users to query network data and receive relevant insights and actionable recommendations.
- Designed operational KPIs and metrics used by the engineering team and team lead to analyze network conditions and communicate findings during supervisor-level meetings.
- Analyze interconnected telecom systems to identify recurring alarm patterns, investigate potential root causes, and support informed troubleshooting decisions.

National Incubation Center **Islamabad, Pakistan**
Software Engineer Intern *2025*

- Engineered a web-based room scheduling system using Firebase for real-time backend integration, reducing booking conflicts and improving operational coordination.
- Collaborated with community experts and internal teams on requirements gathering, technical execution, and ecosystem initiatives.
- Co-organized technology events and supported digital content production for platform engagement.

Parliament of Pakistan **Islamabad, Pakistan**
Software Engineer Intern *2024*

- Automated a previously manual internal ticketing workflow, improving coordination and reducing cross-department response time.

- Gathered operational requirements during parliamentary sessions and acted as a technical liaison between multidisciplinary teams.

Pakistan Television Corporation
Software Engineer Intern

Islamabad, Pakistan
2024

- Produced and edited digital public service content in collaboration with editorial and broadcast teams.

Selected Projects

Secure AWS Deployment for Encrypted Chat System | *AWS, Docker, WebSockets, GitHub Actions*

- Developed a secure cloud deployment for a WebSocket-based end-to-end encrypted chat and file-sharing application.
- Implemented HTTPS with Caddy, containerized services, automated CI/CD, structured logging, health checks, and basic cloud monitoring.
- Applied environment-based secret management and low-cost AWS deployment practices for secure operation.

Cloud-Native Multi-Agent Platform | *FastAPI, Docker, Kubernetes, Terraform, GitHub Actions*

- Productionized a distributed FastAPI platform consisting of a supervisor service and pluggable worker agents.
- Adding automated tests, Docker-based service deployment, vulnerability scanning, and continuous delivery workflows.
- Implemented Kubernetes health checks, centralized logging, Prometheus metrics, Grafana dashboards, and rollback support.

End-to-End Encrypted Secure Chat | *React, Node.js, Web Crypto API, Socket.IO*

- Architected a zero-knowledge messaging and file-sharing platform where the server routes ciphertext without accessing plaintext.
- Implemented client-side AES-256-GCM encryption, chunk-based file encryption, ECDH P-256 key exchange, and ECDSA authentication.
- Added forward secrecy and replay-attack protection using ephemeral keys, timestamps, nonces, and sequence counters.

Multi-Agent Distributed Backend System | *FastAPI, Python, Docker, SQLite*

- Engineered a centralized supervisor with pluggable worker agents for distributed task routing and autonomous coordination.
- Developed Gemini Wrapper and Assignment Coach agents with local mock/cloud modes, task planning, authentication, and persistent memory.
- Created containerized execution scripts and integration tests for scalable local and cloud deployment.

Enterprise LLM-Based RAG Pipeline | *LangChain, FAISS, Ollama, Streamlit*

- Built a document-question-answering system using PyPDF ingestion, HuggingFace embeddings, and FAISS semantic search.
- Grounded local Ollama responses in retrieved document context and designed a reusable Streamlit interface for arbitrary document sets.

Additional Project

Explainable Diffusion Model for Medical Imaging | *PyTorch, UNet DDPM, Grad-CAM*

- Developed a conditional diffusion pipeline on the PathMNIST benchmark using an upgraded UNet architecture and classifier-free guidance.
- Integrated Grad-CAM and Integrated Gradients to analyze generated images and identify clinical validity bottlenecks.
- Evaluated downstream classification performance and conducted mode-collapse analysis on minority classes.

Certifications and Training

- **AWS Cloud Practitioner Essentials** – Amazon Web Services
- **Docker Foundations** – Docker
- **LangChain for LLM Application Development** – DeepLearning.AI
- **Officer Training** – Pakistan Institute for Parliamentary Services