



MUHAMMAD ISHAQ

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SUMMARY

AI Engineer focused on building smart systems powered by deep learning, language understanding, and Generative AI. Skilled in creating reliable RAG pipelines, scalable AI workflows, and production-ready models. Strong background in conversational tools with clear answers, multilingual features, and smooth voice output, delivering complete AI solutions from idea to launch.

WORK EXPERIENCE

Full-Stack AI Engineer (Contract), FlashSync AI Lahore (Remote) **Sep 2026 - Present**

Live: <https://flashsync.ai> | AI Career Agent: <https://ai-career-agent-poc.vercel.app>

- Building the **FlashSync Career Vault**, an AI career agent (Next.js 15, TypeScript) with a zero-knowledge, local-first vault: Web Crypto envelope encryption (PBKDF2 600k + AES-256-GCM, AAD tamper detection) over IndexedDB, passphrase auth with no server accounts, idle auto-lock and encrypted backups.
- Added an AI STAR impact rewriter using Claude on Amazon Bedrock (EU) that sends only the bullet the user picks, plus a Manifest V3 Chrome extension that captures job posts from schema.org, Greenhouse and Lever pages.
- Launched the production website and waitlist in about one week: **"Sync"**, a Gemini RAG chatbot with on-topic guardrails, English/Urdu and voice, and a custom viral waitlist with referral ranking, reCAPTCHA v3 and rate limiting on Turso.
- Reached PageSpeed 97–99 mobile / 99–100 desktop (LCP under 1.9 s, 0 WCAG 2.1 AA violations) and delivered the acceptance QA suite: Playwright on 6 browsers, a 200-user load test with 0 errors and 53 unit tests.

Stack: Next.js, React, TypeScript, Web Crypto, Dexie.js, AWS Bedrock (Claude), Chrome MV3, Node.js, Gemini API, Turso, Vercel, Playwright, Vitest

AI Engineer, Ventive LLC Boise (Remote) **Nov 2025 - March 2026**

- Built and deployed scalable AI and data systems at Ventive, including NLP-powered intelligent chatbots and automated data pipelines on AWS.
- Designed and implemented cloud-based data architectures using AWS services such as AWS Glue and Bedrock with Docker-based deployments for production environments.
- Developed and optimized ETL workflows and data pipelines to enable efficient processing of large-scale enterprise data for analytics and AI use cases.
- Engineered knowledge graphs to model complex entity relationships, reducing AI retrieval latency by up to 85% while maintaining high accuracy.

Team Lead AI & Data Science, Octans Digital Islamabad **Sep 2024 - May 2025**

- Led AI/Data Science team at Octans Digital (Islamabad), driving development of scalable Generative AI and SaaS-based applications.
- Built and deployed RAG pipelines using LangChain and AWS Bedrock, achieving 99.9% uptime and sub-second retrieval latency.
- Designed inference optimisation strategies that reduced operational costs by 25% while improving model throughput and efficiency.
- Mentored junior engineers and apprentices, establishing structured development practices for GenAI-based SaaS products.
- Strong communicator with experience collaborating with cross-functional teams including engineers, product managers, and stakeholders to deliver AI-driven solutions.

Associate AI Engineer, Octans Digital Islamabad

Mar 2023 - Sep 2024

- Worked as an AI Engineer, designing and deploying scalable Generative AI solutions using state of the art LLM models and AWS SageMaker for model fine-tuning and inference.
- Built multilingual NLP systems and computer vision pipelines for real-world applications, focusing on automation, accuracy, and production scalability.
- Developed AI-powered chatbots, speech-to-text pipelines, and intelligent document processing systems to streamline enterprise workflows.
- Delivered production-grade AI solutions that improved operational efficiency and enabled intelligent decision-making across business processes.
- Implemented end-to-end ML workflows including data processing, model training, deployment, and monitoring using cloud-native and containerized environments (ECS, EKS).
- Actively participated in technical discussions, architecture design reviews, and sprint planning to improve system design and delivery efficiency.

EDUCATION

Bachelors of Computer Science, HITEC UNIVERSITY TAXILA

Sep 2017 - July 2021

- **Final year project:** Developed a defense-sector automation system to replace manual inventory management with a web-based software solution using C# and ASP.NET Web Forms.
- Designed and implemented an automated Inventory Management System to digitize data entry, tracking, and retrieval processes, improving operational efficiency and reducing manual workload.
- Built a user-friendly interface for secure and structured inventory handling tailored to defense requirements.
- Developed an object detection-based automated attendance system to reduce manual attendance marking and improve accuracy.
- Integrated computer vision techniques to enable real-time identification and automated record generation for attendance automation use case.
- Delivered an end-to-end system covering requirement analysis, system design, software development, and automation of legacy manual workflows.

Masters of Computer Science, FAST UNIVERSITY ISLAMABAD

Apr 2022 - Aug 2024

- **MS Thesis:** Conducted thesis on Fabric DefectAI, Deep Learning and Computer Vision for Automated Fabric Fault Detection using state-of-the-art object detection and transformer-based models.
- Developed a custom-annotated dataset for fabric defect detection and structured it for training deep learning models.
- Trained and fine-tuned YOLOv8 object detection model with hyperparameter optimization to improve detection accuracy and robustness.
- Applied advanced data augmentation techniques to enhance dataset diversity and improve model generalization.
- Integrated Vision Transformers (ViTs) with CNN-based pipelines to improve feature representation and overall model performance.
- Delivered an end-to-end computer vision system for automated defect detection, improving accuracy and reducing manual inspection effort.

CERTIFICATES

- AWS Certified Cloud Practitioner
- Data Science Methodology – IBM Tools for Data Science
- IBM Introduction to Containers with Docker and Kubernetes
- Generative AI with Large Language Models
- AWS Bedrock ChatGPT Prompt Engineering for Developers

ADDITIONAL INFORMATION

- Programming Languages: Python, Node.js, TypeScript
- Web & Cloud: React, Express, AWS, Vercel, Docker
- Data Visualization tools: Power BI, Tableau
- Languages: English, Urdu, Pashto