

FAHAD REHAN

Machine Learning Engineer | AI Developer

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PROFESSIONAL SUMMARY

Machine Learning Engineer with hands-on experience shipping production-grade AI systems across two software engineering internships, achieving up to 93% model accuracy across NLP, computer vision, and predictive analytics. Skilled in PyTorch, Scikit-learn, and LLM-powered RAG applications (Llama-3, Pinecone), with a track record of building scalable Python/FastAPI backends and automated data pipelines for real-time systems.

TECHNICAL SKILLS

Machine Learning & AI: PyTorch, Scikit-learn, XGBoost, LightGBM, ResNet50, Transfer Learning, Ensemble Modeling, Explainable AI (SHAP, Grad-CAM)

Data & NLP: Natural Language Processing (NLP), SMOTE, Llama-3, RAG Architecture, Pinecone Vector DB, Data Scraping, Sentiment Analysis

Backend & Deployment: Python, FastAPI, Flask, Django REST, Docker, Git, Render, Vercel, Nginx, REST API Integration, WebSocket Integration

Software Development: PostgreSQL, Prisma ORM, Selenium, Browser Automation, Node.js, React 18, Next.js

PROFESSIONAL EXPERIENCE

AI / ML Engineering Intern

May 2025 – Jul 2025

DevelopersHub Corporation | Lahore, Pakistan

- Architected and deployed ML pipelines for fake news detection (93% accuracy) and clustering algorithms for customer segmentation and sentiment analysis.
- Resolved severe class imbalance in production datasets using SMOTE and class-weighting techniques, improving model precision and recall.
- Shipped predictive models to production via Flask and Streamlit interfaces hosted on Render, maintaining version control through Git/GitHub.

Software Engineer Intern — Automation & Data Pipelines

Feb 2026 – May 2026

Bitbash / Inertia | Lahore, Pakistan

- Built a real-time Crypto Surveillance System (Next.js, Express, PostgreSQL/Prisma) polling live data for 250+ assets every 30 seconds, with flash-crash detection (2% threshold, 60s cooldown) triggering automated price alerts.
- Engineered a high-throughput Upwork scraping pipeline (curl_cffi, GraphQL API) achieving ~0.2s per request — 10x faster than Selenium-based scraping — with automated headless token refresh enabling 24/7 unattended uptime and zero-duplicate job delivery to Discord.
- Built an automated execution agent via WebSocket integrations, connecting a FastAPI backend to an Android APK for high-concurrency, real-time actions.
- Authored a 12-file Vitest/Playwright test suite (70% coverage) with GitHub Actions CI/CD, deployed via Vercel, Render, and Supabase, with an Ubuntu VPS fallback (PM2, Nginx).

TECHNICAL PROJECTS

ImmunoAI — Multimodal AI Diagnostic System

2025 – 2026

Academic Final Year Project

- Co-developed a multimodal Clinical Decision Support System (CDSS) for rare autoimmune disease diagnosis, training models on 80,000+ synthetic medical records.
- Engineered a stacking ensemble (Random Forest, XGBoost, LightGBM, Logistic Regression meta-learner) achieving 93% fusion accuracy — combining a 97.92%-accurate ResNet50 vision pipeline (3-stage transfer learning) with an 81.56%-accurate tabular model.
- Implemented ResNet50 transfer learning on MRI scans with Grad-CAM heatmaps and SHAP values for model explainability.
- Deployed an LLM-powered RAG chatbot (Llama-3, Pinecone) within a scalable Django REST backend with automated diagnostic report generation.

EDUCATION

Bachelor of Science in Software Engineering (BSSE) — Lahore Garrison University, 1st Division

Oct 2022 – Jun 2026

Intermediate in Computer Science (ICS) — Govt. Islamia College, Civil Lines, Lahore, 1st Division

Sep 2020 – Mar 2022

Matriculation (Science) — Eden Rose The School System, Lahore, 1st Division

2018 – 2020

AWARDS

Best Award in AI & Machine Learning — DevelopersHub Corporation

May 2025 – Jul 2025