

Muhammad Aleem Azhar

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PROFILE

ML Engineer and SWE new grad (CS 2026). Hands-on with Python, TensorFlow, Transformers, OpenCV, scikit-learn. Builds data pipelines, feature engineering, training and evaluation, model serving via REST, and monitoring with dashboards. Production work in FastAPI, Node.js, Next.js, PostgreSQL/TimescaleDB, Redis, Docker, CI/CD.

EDUCATION

Rhodes College

Memphis, TN

B.S. in Computer Science; Minor in Statistics

May 2026

- Honor Roll (Fall 2023). Selected coursework: Data Structures and Algorithms, Operating Systems, Databases, Probability and Statistics, Machine Learning, Computer Vision
- Yonsei University (Seoul) — Study Abroad: AI and Computer Vision (Fall 2024)

EXPERIENCE

Teaching Assistant, Fundamentals of Computer Science

Jun 2025 - Aug 2025

Johns Hopkins University, CTY

- Increased student comprehension 40 percent by designing labs on recursion, loops, and data structures with guided debugging
- Introduced supervised learning and model evaluation modules; raised engagement 35 percent across about 60 students on two campuses
- Standardized materials and logistics with lead instructors; improved delivery efficiency 30 percent

Data Manager and Administrative Support (Intern)

Jan 2023 - Present

Rhodes Student Employment

Memphis, TN

- Automated payroll and job listings in Python; reduced processing time 30 percent with fewer errors
- Built student and employer feedback pipeline; improved satisfaction 25 percent
- Coordinated campus events; increased participation 20 percent

RHOK-SAT CubeSat Research Intern

May 2023 - Jul 2023

Rhodes College

Memphis, TN

- Implemented TLE and GPredict pass prediction with about 95 percent accuracy
- Developed Python logging service with 99.9 percent uptime and Plotly Dash telemetry; sped analysis 40 percent
- Shipped secure Dash visualization; improved operator usability 15 percent

PROJECTS

City Pulse — Real Time City Analytics

April 2025 - Aug 2025

Python, FastAPI, Transformers, TimescaleDB, Redis, Next.js, Mapbox, Docker

- Built streaming pipeline for social and environmental signals; emotion detection with DistilRoBERTa, anomaly detection, and 24 hour forecasts with 30 second refresh
- Served 10 plus REST endpoints; geospatial dashboard on Mapbox; TimescaleDB hypertables and Redis caching; dockerized services
- Added request logging and basic monitoring; unit tests for API routes; sub second median response time under load

AI Social Mirror

May 2025 - Present

Python, FastAPI, Transformers, scikit-learn, Next.js, Stripe

- Delivered real time tone, intent, and sentiment analysis; improved message clarity 45 percent and repeat usage 40 percent
- Maintained 99.9 percent API uptime; subscription and webhook flow increased conversion 25 percent
- Built offline evaluation suite with precision, recall, and confusion matrix; tuned thresholds to reduce false positives on noisy text

Soccer Predictor Pro

Jul 2025

Python, Flask, scikit-learn, data scraping

- Implemented end to end ML pipeline with feature engineering, cross validation, and calibrated win draw loss probabilities and expected goals
- Used logistic regression and gradient boosting; evaluated with log loss and Brier score; improved over baseline by 10 to 15 percent
- Automated scraping and weekly retraining; dockerized Flask app with a simple dashboard for fixtures and confidence scores

SKILLS

ML and Data: Python, TensorFlow, Transformers, scikit-learn, OpenCV, feature engineering, training and evaluation, model serving (REST)

Data and Storage: PostgreSQL, TimescaleDB, Redis

Backend: FastAPI, Flask, Node.js, REST, webhooks, auth (JWT and NextAuth), Prisma

Frontend: React and Next.js, TypeScript, Tailwind, Mapbox

DevOps: Git and GitHub, Docker, CI and CD with GitHub Actions, Linux, Vercel, dashboards with Plotly Dash