

RASHAAD N MOHAMMED

Bangalore, India

+91 7411369136 | rashaadmohammed@gmail.com | linkedin.com/in/rashaadn

github.com/rash-aad

Education

A.I.E.T

Bachelor of Technology, Artificial Intelligence and Machine Learning

Sep 2022 - Jun 2026

Mangalore, Karnataka

Experience

Startup, Freelance

Machine Learning Engineer

Dec 2025 - Mar 2026

Bangalore, Karnataka

- Designed and trained ML models to classify web vulnerabilities, applying AI evaluation methodologies and algorithm design principles to measure performance improvements and improve triage efficiency by 30% in automated pentesting workflows.
- Engineered microservice architecture for real-time data pipelines in a distributed multi-agent system to scan multiple endpoints in parallel, reducing total analysis time by 65% compared to sequential scanning.
- Fine-tuned LLMs on security datasets using prompt engineering techniques, achieving an 18% improvement in vulnerability classification accuracy and reducing false positives by 30%.
- Generated structured penetration testing reports with ML-based risk scoring and remediation recommendations, integrating AI safety protocols to ensure model alignment and reliability.
- Built end-to-end ML pipeline (data collection → feature extraction → training → inference → reporting) for automated vulnerability analysis at scale, containerizing components with Docker for consistent deployments.

Publications

- Enhanced Comparative Study of Summarization Methods for Legal Assistants. *Dec 2025; 2nd International Conference on Smart Computing and Communication for Sustainable Convergence (ISCCSC)*
- Fine-Tuning Techniques for Large Language Models: A Comprehensive Survey. *July 2025; 11th International Conference on Electronics, Computing and Communication Technologies (IEEE CONECCT)*

Projects

Context-Aware AI Bot

Nov 2025

- Designed a modular real-time data pipeline on Raspberry Pi achieving sub-800ms response latency for edge-based voice interactions
- Implemented a RAG pipeline with persistent memory, improving response relevance by 25% and achieving 90% accuracy in recalling user-taught information.
- Integrated speech-to-text and text-to-speech components to enable natural, real-time voice interactions.
- Optimized LLM inference through quantization and pruning, reducing model size by 60% and ensuring low-latency continuous operation on <2GB RAM hardware
- Supported 1,000+ conversational interactions per session with context retention across multi-turn dialogues.

Multi-Agent Lead Intelligence Pipeline

Aug 2025

- Extracted 3–5 verified contacts per company on average, improving lead coverage by 40% compared to baseline scraping methods.
- Architected microservice-based Python agents for company research, contact discovery, and LLM-driven message generation using the Gemini API
- Implemented robust data preprocessing (Pandas) to handle noisy Excel inputs and ensure consistent downstream pipeline execution.
- Engineered a domain-prioritized search algorithm that improved relevant data retrieval accuracy by 35% in SEO-heavy scenarios

Technical Skills

- **Programming:** Python (primary), C, Shell
- **Machine Learning & AI:** TensorFlow, Scikit-learn, OpenCV, HF Transformers, AI Evaluation, Algorithm Design
- **LLMs & NLP:** Fine-tuning, Retrieval-Augmented Generation (RAG), Prompt Engineering
- **Data & Systems:** MongoDB, SQL, Pinecone (Vector DBs), API Design, Real-time Data Pipelines
- **Tools & Infrastructure:** Docker, Git, Linux, AWS (EC2, S3, Lambda), Microservice Architectures