

Mohammed Afnan

AI/ML Engineer | GenAI & Full-Stack Developer

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SUMMARY

Third-year B.Tech AI/ML student building Generative AI applications with production-minded backends. Co-built the backend and AI layer of a satellite-vision civic enforcement platform (Google Solution Challenge 2026) with guardrails against hallucinated legal citations. Solo-built an explainable government-scheme eligibility engine, a face-recognition attendance system, and a real-time computer-vision app. 4 hackathons; 2nd Prize at REVA University. Seeking an AI/ML or software engineering internship.

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, SQL, HTML, CSS

AI/ML: Generative AI, LLM APIs (Gemini 2.5, OpenAI, Groq/Llama 4), LangChain, Computer Vision, OpenCV, MediaPipe, face-recognition (dlib)

Frameworks: React, Next.js, Flask, Flask-SQLAlchemy, Express.js, Node.js

Databases: PostgreSQL, SQLite, Supabase, Firebase

Cloud & Tools: Docker, Git, GitHub, Vercel, Render, Postman, JWT Auth, pytest

PROJECTS

InfraWatch - Satellite-Based Illegal Construction Detection Platform | Google Solution Challenge 2026 | Team of 2 | Live

React, Node.js, Express, Gemini 2.5 Flash, Groq Llama 4, ESRI Satellite Imagery, JWT, Vercel, Render

- Co-developed a civic enforcement platform covering 15 Bengaluru wards (218 seeded violations), using Gemini 2.5 Flash for vision-based detection with confidence-scored bounding boxes.
- Built confidence-based SLA routing (4/12/24-hour tiers), role-based access for 4 municipal roles, officer dispatch, audit logging, and automatic Gemini-to-Groq AI failover.
- Built AI-assisted legal-notice generation citing the Karnataka Municipal Corporations Act 1976 with guardrails against hallucinated section citations, a public citizen-reporting portal, and a one-click City Scan workflow that triages 4 hotspots in under 30 seconds.

YojanaSaarthi - Government Welfare Scheme Eligibility Engine | Solo | Live

Next.js, TypeScript

- Designed a deterministic eligibility engine for 26 Indian welfare schemes, combining hard constraints (income caps, category, occupation) with weighted multi-factor scoring and no LLM in the decision loop.
- Built explainable output so users see exactly why they do or don't qualify, making every decision traceable and auditable.
- Owned the project end-to-end: scheme data modeling, scoring logic, UI, and deployment.

EduGuard AI - Face-Recognition Attendance System | Solo | GitHub

Flask, Flask-SQLAlchemy, SQLite, OpenCV, face-recognition, Bootstrap, pytest

- Built a teacher-facing attendance platform with camera-based face recognition, class and student management, manual attendance correction, absence notifications, and PDF/Excel exports.
- Enforced authentication and ownership checks on protected resources, and covered the codebase with a pytest suite.

Eye Guardian - Real-Time Eye-Health Monitoring App | 2nd Prize, REVA University Hackathon | GitHub

Python, OpenCV, MediaPipe, NumPy, Tkinter

- Built a real-time webcam app using MediaPipe Face Landmarker to detect blinks and estimate eye-comfort and dry-eye risk.
- Implemented adaptive blink thresholding, confidence-based tracking, configurable 1-180 minute sessions, and persistent session analytics for blink rate and eye openness.

EDUCATION

REVA University, Bengaluru - B.Tech, Artificial Intelligence & Machine Learning | Expected 2028

CGPA: 8.83/10 | Class XII: 91% | Class X: 92%

ACHIEVEMENTS & CERTIFICATIONS

- Participated in 4 hackathons, including Google Solution Challenge 2026, an AWS hackathon, and REVA University (2nd Prize).
- Generative AI in Action and Cloud Computing Fundamentals (IBM SkillsBuild); Partnering with AI in the Workplace (Datacom, Forage), Aug 2026.