AARYAN M

+91 9182445210 | aaryanmadhan@gmail.com | linkedin.com/in/aaryan-m-52627128b | github.com/Aaryan7117

TECHNICAL SKILLS

Programming Languages: Python, TypeScript, JavaScript, C++, C, Java, SQL (PostgreSQL, MySQL, SQLite)
AI / ML & GenAI: LLMs, Multi-Agent Systems, RAG, Ollama, PyTorch, TensorFlow, Hugging Face, Scikit-learn, ONNX Runtime, Grad-CAM, Prompt Design
Backend & Frameworks: FastAPI, Flask, Node.js, Express, React, Next.js, REST APIs, Server-Sent Events (SSE), WebSockets
Databases & Vector Stores: ChromaDB, FAISS, PostgreSQL (Supabase), SQLite (WAL), Neo4j (Graph RAG), BM25, Redis, MongoDB
Developer Tools & DevOps: Git, GitHub, Docker, CI/CD, Postman, Linux/Bash, Vercel

WORK EXPERIENCE

GenAI Intern | SocialEagle.AI

- Built an enterprise-grade **RAG pipeline** processing **50+ SEC 10-K filings**, cutting analyst document review time with source-grounded citations.
- Engineered a single-pass **hybrid chunking pipeline** combining layout parsing with semantic boundaries, eliminating misaligned splits on tables and nested sections.
- Architected a 4-tier hybrid retrieval engine (**FAISS, Neo4j, SQLite, BM25**) with reciprocal rank fusion and **LLaMA-3.3-70B** reranking to maximize precision.

Machine Learning Intern | Smarted

- Delivered a **15% accuracy improvement** over baseline heuristics in student risk forecasting by engineering leak-free feature pipelines on high-dimensional data.
- Trained and benchmarked 5+ ML models (Scikit-learn, TensorFlow); containerized top performers into production REST APIs for dashboard integration.

Web Development Intern | Cars Arabia

- Accelerated customer query turnaround by building automated lead-qualification and AI inquiry routing flows in Node.js.
- Developed responsive client search modules with dynamic vehicle filters, improving listing discoverability across 1,000+ entries.

KEY PROJECTS

Code Mate — Agentic Local AI Coding Assistant [GitHub] **1st Place GDSC** | TypeScript, Ollama, Llama 3.2, AST Diagnostics, Node.js

- Won **1st Place out of 100+ teams** at GDSC Hackathon (and **3rd Place at HACKIT 2025**); built a 100% local VS Code extension running Ollama with zero cloud dependencies.
- Implemented 6 specialized coding agents (Chat, Explain, Debug, Generate, Review, Refactor) leveraging editor AST and compiler diagnostics for automated bug fixing.
- Engineered low-latency token streaming with workspace context harvesting, delivering real-time responses directly within the editor.

SalesGen — Autonomous Multi-Tenant AI Sales Platform [GitHub] FastAPI, Python, Supabase, ChromaDB, React, TypeScript, SSE

- Solo-built a multi-tenant B2B SaaS platform (backend, React dashboard, mobile app) with a 1-line `<script>` embeddable widget SDK, validated with demo tenants.
- Engineered a 13-step hybrid intent pipeline combining 9 regex signals with LLM ambiguity analysis, contradiction detection, and rolling 4-turn memory.
- Implemented a 5-stage adaptive pacing engine (Educational to Handoff) with ChromaDB retrieval and real-time SSE live-agent takeover.

ForeBlendCast — Hybrid AI–NWP Weather & Hazard Forecasting [GitHub] Solo Project | Python, ML, GIS, Android

- Solo-built a multi-model forecasting system covering **750+ districts** in India, blending 4 NWP models (NCUM, NEPS, IMD, ECMWF) for extreme hazard alerts.
- Reduced precipitation bias using regime-dependent ML calibration and softmax temperature scaling across 4 years of historical data (2020–2023).
- Deployed interactive GIS visualizers on Web and Android with area-weighted 90th-percentile grid-to-district spatial aggregation.

RetinaScan AI — Offline Diabetic Retinopathy Screening [GitHub] Solo Project | React 18, ONNX Runtime, EfficientNet-B3, Grad-CAM

- Solo-built an offline-first PWA executing instant on-device fundus screening via quantized EfficientNet-B3 and ONNX Runtime, validated on **16,000+ APTOS images**.
- Generated Grad-CAM explainability heatmaps pinpointing microaneurysms and hemorrhages for clinician-verifiable diagnostic confidence.
- Integrated ABDM (ABHA ID) health records, multilingual voice guidance, and automated clinical PDF reports for connectivity-free rural camps.

HONORS & ACHIEVEMENTS

- **1st Place Winner (100+ teams)** — Google Developer Student Club (GDSC) Hackathon 2024: Built Code Mate, an agentic AI coding assistant.
- **3rd Place Winner** — Student Research Day 2026: NyayaVani – AI-Powered Legal Assistant.
- **3rd Place Winner (150+ participants)** — HACKIT Hackathon 2025: Built a real-time developer tooling and code optimization engine.
- **Special Mention** — iCube 5.0, Science Club, 2026.
- **Competition Winner** — Technical Symposium conducted by ACE, SVCE.

EDUCATION

Sri Venkateswara College of Engineering (SVCE) — B.E. in Computer Science & Engineering 2023 – Expected 2027 | **CGPA: 8.34 / 10.0**

Narayana Junior College & Schools — Higher Secondary (Class XII): **96.1%** | Secondary (Class X): **98.6%**