

ACCHUTHA K S

AI / GenAI Engineer | Full-Stack Developer

Bengaluru, Karnataka | +91 86609 30515 | acchuachutha004@gmail.com | LinkedIn | GitHub | Portfolio

SUMMARY

MCA (Data Science) student who builds end-to-end AI products — agentic RAG systems, real-time voice agents, text-to-SQL analytics and crime-intelligence tools — backed by FastAPI, React/Next.js and PostgreSQL. Comfortable taking an idea from model to deployed, user-facing product. Seeking an entry-level AI/ML or GenAI engineering role.

EDUCATION

MCA — Data Science, Chanakya University, Bengaluru · CGPA 7.53/10

Expected 2027

BCA, Christ University · CGPA 7.78/10

2025

EXPERIENCE

Python Developer Intern, Tech Centrix

2 months

TECHNICAL SKILLS

Languages & Core CS: Python, SQL, JavaScript, TypeScript, Dart · Data Structures & Algorithms, OOP, DBMS

GenAI & Agents: RAG, LangGraph, LangChain, LLM APIs (Groq, Gemini, OpenAI), Tool Calling, Embeddings, Vector DBs (ChromaDB), Reranking, Guardrails, RAGAS Evals, Prompt Engineering, MCP

ML & Data: scikit-learn, NetworkX, TensorFlow, PyTorch, Computer Vision (MobileNetV2), NLP, NumPy, Pandas, Plotly, Power BI, Statistics

Backend & Web: FastAPI, REST APIs, WebSockets, JWT, Node.js, NestJS, React, Next.js, Flutter

Databases & DevOps: PostgreSQL, SQLAlchemy, Redis, SQLite, Docker, GitHub Actions (CI/CD), Git, Linux

PROJECTS

AEGIS Protocol — Real-Time Voice Agent | *React, Node.js, WebSockets, Deepgram, Groq Llama 3.3, Cartesia* [GitHub]

- Built a streaming speech-to-text → LLM (tool calling) → text-to-speech pipeline with sub-second responses and barge-in, so users can interrupt mid-reply.
- Designed two agent modes — a civilian assistant (cabs, music, appointments) and an emergency mode (vitals logging, medevac dispatch) — with a live React PWA. Built at The Bengaluru AI Hackathon 2026.

BIO-RAG — Biomedical Agentic RAG | *LangGraph, ChromaDB, Gemini, FastAPI, React, RAGAS* [GitHub]

- Built a LangGraph agent that answers drug-gene-disease questions from PubMed, UniProt and Open Targets, with a self-correcting loop that rephrases weak queries.
- Used S-PubMedBERT embeddings, FlashRank reranking, input/output guardrails and API failover; evaluated with RAGAS (faithfulness, relevancy, context precision/recall).

Crime-AI — Crime Intelligence Platform | *FastAPI, PostgreSQL, LangChain, NetworkX* [GitHub]

- Built for the Karnataka Police Datathon 2026: analyses crime records to find hotspots, repeat offenders and district trends, with an OpenAI-powered natural-language chatbot.
- Designed a 9-table PostgreSQL schema and 20+ REST endpoints; used NetworkX graph analysis to map links between accused persons.

MEDHA LINK — Emergency Response Platform | *FastAPI, PostgreSQL, WebSockets, Docker* [GitHub]

- Connected ambulance crews and hospitals with live WebSocket streams of vitals, GPS and case events over an 11-table PostgreSQL model.
- Built a 5-state case lifecycle, offline-first sync, JWT role access, FHIR R4/CDA handover exports, a bilingual (English/Hindi) voice assistant and pytest end-to-end tests.

SwiftDash — Text-to-SQL Analytics | *FastAPI, Next.js, Gemini, Plotly* [GitHub]

- Built a 3-stage LLM pipeline (plan → generate SQL → validate/repair) that turns plain-English questions into safe SQL and interactive dashboards across 9 chart types.
- Added follow-up questions with context memory, CSV/JSON/XLSX upload and PDF/JSON/CSV export.

EcoHabit — AI Waste-Sorting App | *Flutter, TensorFlow, NestJS, Redis* [GitHub]

- Built a Flutter app that classifies waste from a photo with MobileNetV2 and suggests disposal and upcycling options, plus marketplace and gamification.
- Split the system into a NestJS API, a FastAPI ML service and a Next.js admin panel, with Redis caching and rate limiting.

CERTIFICATIONS & HACKATHONS

- **DSA with Python** — TuteDude (2026); solved 50+ LeetCode problems (arrays, linked lists, sliding window, DP).
- **Hackathons (2026):** Karnataka Police Datathon, The Bengaluru AI Hackathon (Sapthagiri NPS University), REVA Hackathon.