Shantanu Awate

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Portfolio: shantanu-00.github.io · GitHub: github.com/Shantanu-00 · LinkedIn: linkedin.com/in/shantanuawate

PROFESSIONAL SUMMARY

Computer Science & Engineering student (2021–2025) specializing in applied AI systems and cloud-native architectures. Experienced in building self-evolving AI agents, on-device personalization systems, and optimization platforms using Gemini, FastAPI, and Cloud Run. Strong in algorithms, distributed systems, and full-stack development.

TECHNICAL SKILLS

Languages: Python, C++, JavaScript, SQL **AI & Data**: Gemini (2.5 Flash, Nano), Scikit-learn, NumPy, Pandas, Genetic Algorithms, 2-Opt Heuristics **Cloud & DevOps**: Google Cloud Run, Firestore, Artifact Registry, Firebase, Docker, Git, GitHub, Linux **Frameworks & Frontend**: FastAPI, Next.js, React, Node.js, Express.js, Tailwind, OSRM, Leaflet

SELECTED PROJECTS

Codex Vitae — Self-Evolving AI Agent Platform

Google Cloud Run Hackathon 2025 · Gemini 2.5 Flash · Google ADK · Firestore · React · Cloud Run
Live Demo: codex-vitae-hackathon.web.app | GitHub: github.com/Shantanu-00/Codex-Vitae

- Engineered a **multi-agent AI system** (Orchestrator, Specialist, Feedback Agents) that **automatically mutates prompts** and maintains agent lineage based on user feedback.
- Deployed a **fully serverless architecture** using **Google Cloud Run**, **Firestore**, and **Artifact Registry**, enabling scalable, zero-maintenance AI agent hosting.
- Leveraged **Gemini 2.5 Flash** and the **Google ADK** (Agent Development Kit) to execute the feedback-driven "auto-mutation" logic, enabling agents to **self-evolve**.

Crucible — On-Device AI Personalization Engine

Google Chrome Built-in AI Challenge 2025 · Gemini Nano · Chrome (Manifest V3) · IndexedDB
GitHub*:* github.com/Shantanu-00/crucible-chrome-extension

- Engineered a **privacy-first** Chrome extension using **Gemini Nano** to run all AI processing and user profiling entirely **on-device**, ensuring zero data leaves the user's machine.
- **Architected a sophisticated client-side profiling** pipeline that synthesizes raw browsing behavior (scroll, time, search intent) into a stable **Long-Term Profile (LTP).**
- **Applied statistical models**, including **Exponential Decay** and **EWMA** (Exponentially Weighted Moving Average), to algorithmically model the evolution of user interests in real-time.

PathSense — AI Route Optimization Web App

Next.js frontend · FastAPI backend · OSRM/OSM routing · Docker

Live Demo: v0-path-sense.vercel.app | GitHub: github.com/Shantanu-00/PathSense

- Built end-to-end pipeline: natural-language intent → geocoding → OSRM distance matrix → optimization, reducing route distances by up to **35%** vs. naïve ordering.
- Implemented **3 optimization** methods (Nearest Neighbor, **2-Opt, Genetic Algorithm**) and features: fixed start/end, return-to-origin, interactive route editing.
- Minimized paid API reliance with **Dockerized local OSRM server** + public fallback endpoints; integrated Leaflet for interactive visualization.

LEADERSHIP & INITIATIVES

Cybersecurity Lead — Google Developer Student Club (GDSC)

- Led a team of 4; organized workshops for 50+ students on secure coding and ethical hacking; mentored juniors.

EDUCATION

B.E., Computer Science & Engineering (2021–2025)
Shrimati Kashibai Navale College of Engineering, Pune (CGPA: 8.61/10)