

ARPIT TAGADE

B.Tech (AI & Data Science) Student | Full-Stack & Backend Engineering

Nagpur, Maharashtra, India | +91 9356055210 | arpitagade5@gmail.com

GitHub: github.com/tagadearpit

LinkedIn: linkedin.com/in/tagadearpit

Live Portfolio: tagadearpit.vercel.app

TECHNICAL SKILLS

Languages: Java, C, C++, JavaScript / TypeScript, SQL

Frontend: Next.js (App Router), React, Tailwind CSS, Framer Motion

Backend: Spring Boot, Spring Security, Node.js, Express.js, REST APIs, WebSockets, OAuth2/JWT

Databases: MongoDB, MySQL, PostgreSQL, Oracle

Hardware / IoT & Tools: ESP32, Arduino Uno, Embedded C/C++, Git/GitHub, Firebase, Vercel

PROJECTS

Monika AI — Full-Stack AI Companion Platform

Node.js · Express · MongoDB · Google Gemini 2.5 API · Firebase Admin · JWT | Live: monika-ai-0jpf.onrender.com

- Architected a multi-modal AI companion app on the Gemini 2.5 API, with real-time vision, speech-to-text, and text-to-speech.
- Built a dual-pipeline LLM architecture: a stateful conversational layer plus an async pipeline persisting user preferences to MongoDB.
- Secured the app with JWT authentication (Google OAuth, Firebase Phone Auth, email-OTP), Helmet CSP, and brute-force lockouts.

Neosis — Real-Time Secure Messaging Platform

Spring Boot · React / React Native · WebRTC · WebSockets (STOMP) · MongoDB · OAuth2 | Live: neosis-static-site.onrender.com

- Architected a hybrid transport layer — WebSocket signaling for messages, REST for binary uploads — avoiding STOMP buffer saturation.
- Engineered peer-to-peer video and audio calling via WebRTC, with STUN-based NAT traversal and built-in DTLS-SRTP encryption.
- Hardened cross-origin security with custom Spring Security filter chains (CORS/CSRF) across multiple rounds of review.

CandyRobot — IoT & AI Hardware Integration

ESP32 · C++ · Google Gemini API

- Built C++ firmware for an ESP32 robotic interface, driving servo motors and a 128×64 OLED display under real thermal/voltage constraints.
- Designed asynchronous execution loops reconciling local hardware timing with external Gemini API network calls.

EDUCATION

B.Tech, Artificial Intelligence and Data Science — Expected 2029

Wainganga College of Engineering and Management, Nagpur, Maharashtra