

SATHWIK PENTAPATI

Software Engineer — Full Stack Developer

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Education

Manipal Institute of Technology (MIT) Bengaluru

B.Tech in Computer Science, CGPA: 8.9

Aug 2023 – May 2027

Bengaluru, India

Narayana Junior College

Class XII (Intermediate), Percentage: 97.9

2021 – 2023

Vishakhapatnam, India

Narayana Group of Schools

Class X (SSC), Percentage: 96.00

2020 – 2021

Narsipatnam, India

Professional Experience

Indian Space Research Organisation (ISRO)

Research and Software Development Intern

December 2025 – Present

Hyderabad, India

- Developed an Android-based secure communication and monitoring application for mission-critical systems using Kotlin and Jetpack Compose.
- Implemented real-time location tracking, MQTT-based messaging, and offline-first architecture to ensure reliability in low-connectivity environments.
- Integrated SIP-based voice calling and optimized media handling for low-latency communication across distributed systems.
- Worked closely with scientists and engineers to translate operational requirements into scalable, production-ready software modules.

Kritno

Software Engineer Intern

Aug 2025 – Dec 2025

- Developed a Vue.js-based accessibility widget with plug-and-play integration capability for any website.
- Implemented automated DOM scanning to detect and report WCAG compliance issues in real time.
- Built visual issue reporting mode using Playwright for automated website screenshots and accessibility audits.
- Engineered reusable component architecture enabling seamless deployment across multiple client platforms.

Projects

Smart Meds (AI Hospital System) 🧠

Tech: React.js, FastAPI, PostgreSQL, JWT Authentication, VADER NLP, OpenAI GPT-4 API

- Developed an AI-powered hospital management system featuring a GPT-4 medical chatbot, automated appointment scheduling, and real-time ADR monitoring.
- Built scalable FastAPI + PostgreSQL backend services optimized for high-traffic medical workflows.

LeetMate (AI-Powered Chrome Extension) 🧠

Tech: React.js, Chrome Extension APIs, Webpack, Gemini 2.0 Flash API, Prism.js, Manifest V3

- Developed a Chrome extension that generates AI-powered solutions for LeetCode problems with emoji-rich explanations.
- Integrated Gemini 2.0 Flash API to provide real-time, multi-language solutions.
- Built a modern, responsive UI ensuring smooth browser performance.

CodeGuardian AI (Generative AI Code Reviewer) 🧠

Tech: React, TypeScript, Google Gemini API, GitHub REST API, Firebase Firestore, Tailwind CSS

- Built an AI-driven code analysis platform to automate PR reviews with security and performance insights.
- Engineered a “Chat with Repo” LLM interface using tool-calling and RAG-style queries.

Skills

- **Languages:** C, Java, Python, HTML5, JavaScript, TypeScript
- **Tools & Platforms:** Git, AWS, Docker, Kubernetes, Postman
- **Frameworks:** React.js, Next.js, Redux, Vue.js, Express.js, Node.js, MongoDB, SQL
- **Security & Testing:** JWT, OAuth, OWASP, Web Performance Optimization
- **Operating Systems:** Windows, Linux

Achievements & Certifications

- **HACK'NIGHT 2025 Finalist:** Reached the finals in a national-level hackathon, showcasing innovative full-stack solutions.
- **Certifications:** Meta Back-End Developer Specialization, Java and Object-Oriented Programming, AWS Cloud Practitioner, IBM Linux.
- **1st Prize - State-Level Badminton:** Demonstrated discipline and competitiveness in state sports events.
- **NSS Volunteer:** Coordinated and led large-scale events and technical workshops, improving team collaboration and participation.