

Sanyog Tripathi

+91-9695596099 | sanyogtripathi29@gmail.com | linkedin.com/in/sanyog-tripathi29 | github.com/Sanyog29

EDUCATION

VIT-AP University

Amaravati, India

Bachelor of Technology in Computer Science; CGPA: 8.14/10.00

Sept 2023 – May 2027

- Coursework: Data Structures & Algorithms, Database Management Systems, Operating Systems, Computer Networks, Object-Oriented Programming, Design & Analysis of Algorithms, Artificial Intelligence, Soft Computing, Software Design & Architecture, Advanced Competitive Coding I & II

EXPERIENCE

Software Development Engineer Intern

Sept 2025 – April 2026

Autopilot Offices (Parsvatech Pvt Ltd)

Remote (Extended to Hybrid)

- Architected backend services for Operate (FMS), a property management platform, implementing RESTful APIs with Node.js and Express.js while ensuring application stability through debugging and performance optimization
- Engineered Bill OS leveraging Gemini LLM orchestration to deliver cost-reduction insights from multi-format bill documents
- Spearheaded migration of legacy offline systems to cloud infrastructure, establishing deployment pipelines and resolving architectural bottlenecks; fixed Google Search Console indexing issues improving application discoverability

TECHNICAL PROJECTS

Erithm | Python, OpenRouter API, Docker

- Architected a program-analysis-based security tool for LLM tool-calling agents, modeling agent execution traces as compiler intermediate representations to detect prompt-injection and untrusted-input-reaching-privileged-tool violations – a defense class that published research (RTBAS, AgentArmor, DRIFT) has proposed but never shipped
- Designed a pluggable taint-classification layer behind an abstract classifier interface: an LM-judge implementation calling the OpenRouter API, plus a zero-dependency heuristic fallback that requires no API key and runs fully offline

IssueSnap | Next.js, Node.js, Express.js, Supabase, Gemini VLM

- Developed full-stack civic complaint system with Gemini Vision Language Model for automated image analysis and context-aware letter generation, implementing dual-role authentication (user/admin) with JWT and real-time status tracking
- Architected database schema in Supabase with optimized queries and designed system to handle 100,000+ concurrent users through efficient connection pooling; built responsive Next.js frontend with Server-Side Rendering and Tailwind CSS

Codeforces Assistant | Python, Streamlit, Gemini API, Codeforces API

- Built AI-powered learning platform providing algorithmic hints without revealing solutions, integrating Gemini API for natural language generation and Codeforces API for dynamic problem filtering by difficulty (800-3500) and topic tags

AstraX | C++, CMake

- Engineered terminal-based code editor with vim-inspired modal interface, supporting C++ and Java compilation through system calls and process management with optimized buffer management and syntax highlighting

SmritiDB | C++, CMake

- Architected custom relational database with SQL-like CLI implementing CRUD operations, file-based storage with atomic operations and data recovery mechanisms ensuring transactional integrity

TECHNICAL SKILLS

Languages: C, C++, Java, Python, JavaScript, HTML5, CSS3, SQL

Frameworks & Libraries: React, Next.js, Express.js, Tailwind CSS, OpenCV, Keras, TensorFlow, XGBoost, Pandas, NumPy, STL, Streamlit

Developer Tools: VS Code, Vim, Cursor, MCP Servers, Sublime Text, Terminal, Git, CMake

Databases: Supabase (PostgreSQL), MySQL, MongoDB

Core CS: Data Structures, Algorithms, Object-Oriented Programming, Operating Systems, DBMS, Computer Networks, Software Design Patterns

ACHIEVEMENTS & CERTIFICATIONS

Competitive Programming: 500+ problems solved (LeetCode, Codeforces, AtCoder, CodeChef); Ranked 4,067/28,333 (Top 14%) in LeetCode Contest 452

Hackathon: 1st Place VIT-AP Datathon - implemented data pipeline with Python, Pandas, NumPy, XGBoost

Security: Active competitor in Capture-the-Flag (CTF) competitions; participates in bug bounty programs

Certifications: AWS Academy Graduate (Cloud Architecting & Foundations), Google Analytics, C++ STL (CodeChef)