

VIHAN ROJITHA

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SUMMARY

I am a Full-Stack Software Engineer and UCSC IT graduate (3.27 GPA). While my foundation is in Java and Spring Boot, I have built a freelance/portfolio of intelligent apps using Next.js, React 19, and the Vercel AI SDK. I am experienced in implementing Gen-AI (RAG) solutions using vector databases and semantic search. I am a proactive builder dedicated to delivering scalable, high-quality code in modern tech environments.

TECHNICAL SKILLS

AI & LLM Integration: Gen-AI (RAG Architecture), LangChain, LangGraph, Multi-Agent Systems, Vercel AI SDK, Prompt Engineering
Backend: Java, Spring Boot, Hibernate, JPA, Node.js, Express.js, REST APIs, JWT, Zod
Frontend: JavaScript, TypeScript, React, Next.js, Tailwind CSS, ShadCN, Redux, HTML/CSS
Databases: MySQL, PostgreSQL, Supabase
Tools: Git, Postman, Maven, NPM, Clerk Auth, Stripe API, Vercel, Render, AWS

WORK EXPERIENCE

Software Engineer | Apex Software Solutions **Feb 2025 - Present**

- Implemented role-based access control system with hierarchical permissions and organizational overrides, ensuring secure multi-user access across different user types and access levels
- Enhanced system performance and security by integrating distributed caching, implementing locking mechanisms for concurrent operations, and designing optimized database schemas with JPA/Hibernate ORM
- Developed automated billing and invoicing system with dynamic pricing calculations and usage tracking, reducing manual processing overhead through intelligent rate computation and billing period optimization

Junior Software Developer | Apex Software Solutions **Jan 2023 - Oct 2023**

- Developed Java applications and backend solutions using APIs with OOP concepts. focusing on healthcare systems (laboratory and pharmacy modules)
- Optimized databases by designing ER diagrams and writing advanced queries to meet business needs.

Intern Software Developer | Apex Software Solutions **Sep 2022 - Dec 2022**

- Performed backend development, troubleshooting, and system maintenance while providing technical support and training for end users

PROJECTS

SmartNotes: AI-Powered Notes Manager & MCP Server | *Personal Project* | [Project Documentation](#) | [Github](#) | [Live demo](#)

- Architected a Retrieval-Augmented Generation (RAG) system using Supabase Vector and Vercel AI SDK, creating a responsive chat interface that contextually retrieves and interacts with private notes.
- Engineered a fully compliant Model Context Protocol (MCP) server that exposes internal tools to external AI agents (like Claude) with granular permission scopes, enabling secure, authenticated note management.

(Next.js, Tailwind CSS, Typescript, Vercel AI SDK, XMCP, Zod, Supabase, OpenAI)

Log2AI: Multi-Agent Log Analysis Tool (RAG) | *Personal Project* | [Project Documentation](#) | [Live demo](#)

- Architected a Multi-Agent RAG system using LangGraph to automate root cause analysis of complex Spring Boot application logs.
- Designed a 3-agent pipeline (Retrieval, Summarization, Verification) to eliminate hallucinations and provide high-accuracy diagnostic reports.
- Implemented a Hybrid Chunking Strategy (Request-based + Time-window) to preserve the context of distributed request flows across millions of log entries.

(Python , FastAPI, LangChain, LangGraph, PostgreSQL (pgvector), Gemini API, TypeScript, Next.js, Vercel AI SDK)

PROJECTS

Apex Dev MCP - AI-Powered Development Standards Automation | Internal Initiative

- Spearheaded an internal initiative to architect a custom Model Context Protocol (MCP) server, bridging AI agents with the codebase standards to automate code reviews and enforce strict adherence to company-specific Java/Spring Boot architectural patterns.
- Engineered a static analysis engine that parses Git diffs to detect anti-patterns (e.g., DTO validation, Transactional boundaries) in real-time, reducing manual review overhead and ensuring architectural consistency.

(TypeScript, Node.js, Model Context Protocol (MCP), Zod)

PerfectorCV AI - AI Resume Analysis & Optimization SaaS | Personal Project | [Project Documentation](#) | [Live demo](#)

- Built full-stack AI-powered SaaS platform that analyzes resumes against job descriptions, identifies keyword gaps, and automatically generates tailored cover letters and follow-up messages
- Engineered multi-model AI system using LangChain with OpenAI (primary) and Gemini (fallback), implementing resilient error handling and seamless model switching for 99.9% uptime
- Implemented Stripe-based subscription system with tiered pricing, webhook-driven plan management, and automated usage limit enforcement
- Implemented secure authentication using Clerk with Neon DB synchronization via webhooks, managing user profiles, subscription states, and report history across distributed systems

(Next.js, TypeScript, Tailwind CSS, ShadCN, LangChain, OpenAI, Gemini, Neon DB, Clerk, Stripe)

T-Shirt Design Studio - Interactive 3D Design Platform | Personal Project | [Project Documentation](#) | [Github](#) | [Live demo](#)

- Developed real-time 3D t-shirt customization platform with interactive canvas and live preview, allowing users to create, modify, and visualize custom designs on a 3D model
- Implemented multi-user synchronization enabling seamless real-time updates for color selection and design modifications with local storage for design persistence

(React, Redux, Tailwind CSS, Three.js, React Three Fiber, Fabric.js)

EDUCATION

Bachelor's Information Technology (3.27 GPA)	2021 - 2024
University of Colombo School of Computing	
Diploma in Information and Communication Technology	2018 - 2020
Aquinas College of Higher Studies	

CERTIFICATIONS

Postman API Fundamentals Student Expert Certification (Postman) - [credential](#)
Career Essentials in Software Development by Microsoft (LinkedIn) - [credential](#)
The Complete 2023 Web Development Boot-camp (Udemy) - [credential](#)
Java Object-Oriented Programming (LinkedIn) - [credential](#)