Manoj Konda

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Education

San Jose State University Aug 2025 - May 2027
Master of Science in Software Engineering *San José, USA*
Coursework Software Systems Engineering, Enterprise Software Platform, Software Security Technologies

Vellore Institute of Technology Sep 2021 - May 2025
Bachelor of Technology in Information Technology GPA: 3.67/4.00 *Vellore, IN*
Coursework Data Structures & Algorithms, Object Oriented Programming, Web Technologies, Cyber Security

Technical Skills

Languages: Python, Java, JavaScript/TypeScript, SQL, C++
Web Dev & DevOps: React, Node.js, Express.js, NestJS, Tailwind CSS, MongoDB, RESTful APIs, Kubernetes, Git
Security: Threat Modeling, Input Validation, Role-Based Access Control

Work Experience

CyberMind Works Oct 2023 - Dec 2023
Full Stack Web Developer Intern (Postgres, NestJS, Next.js, MikroORM, AWS, Kubernetes, Docker) *Chennai, IN*

- Designed & implemented **scalable online code execution environments** for React apps using **AWS EC2** and Docker, orchestrated with Kubernetes, to enable isolated execution per user session and reduce load time by 30%.
- Leveraged **AWS SDK** to deploy **dynamic, user-specific** React environments and automate data provisioning, reducing manual setup time by 40% and improving environment availability by **25%** to enhance platform reliability.
- Improved API latency by 20% to ensure seamless integration with existing frontend stack and collaborated with the co-founder to design systems in a generic, scalable manner aligned with future product goals.

Apple Developers Group Mar 2022 - Jul 2023
Backend Web Developer (HTML, CSS, React, JavaScript, MongoDB, Node.js, Python) *Vellore, IN*

- Spearheaded development of a backend system to authenticate users and **dynamically retrieve/validate** Excel-based questions, streamlining screening of 200+ applicants and reducing manual workload by **90%**.
- Boosted backend performance in recruitment portal, **lowering response latency by 25%**.
- Mitigated security vulnerabilities in recruitment portal, strengthening authentication and data integrity.

Projects

ConfigGuardian — TypeScript, Node.js, Express.js, React, Gemini LLM APIs, Fetch.ai Agentverse [GitHub]

- Developed **LLM-powered configuration analyzer** that automatically detects & prioritizes misconfigurations in Dockerfiles & Kubernetes YAMLs strengthening **DevSecOps workflows** with actionable security insights.
- Implemented Express.js backend to orchestrate **Gemini model evaluations**, perform dynamic severity scoring, and generate developer feedback in real time, enhancing the interpretability of configuration analyses.
- Integrated Fetch.ai Agentverse within the analysis pipeline to produce **cryptographic provenance receipts**, anchoring scan data on a decentralized ledger for verifiable, traceable, and tamper-evident reporting.

Memory Engine — TypeScript, Node.js, Express.js, MongoDB Atlas Vector Search, LangChain [GitHub]

- Built metadata-driven **debugging memory** system that recalls past production fixes via semantic search across incidents.
- Integrated MongoDB Atlas Vector Search with **hybrid semantic and metadata ranking** to match errors by service, environment, and version, improving contextual recall accuracy by 25%.
- Engineered **context-indexing pipeline** combining embeddings and structured metadata, enabling scalable retrieval over evolving production incidents and fostering continuous learning from past fixes.

UniRide — Typescript, Node.js, Express.js, React.js, MongoDB, Socket.io, TailwindCSS, CRON Jobs [GitHub]

- Architected a MERN-based **ride-sharing platform** for university students with carpool management, host-specific controls (peer reviews, host transfers, cancellations) designed to scale for 500+ concurrent ride requests.
- Integrated a real-time in-ride group chat system using Socket.io, allowing seamless communication between ride members; enhanced reliability with a **CRON-based fallback system** to auto-complete rides when users fail to do so manually.
- Performed threat modeling for UniRide, addressing risks in chat, authentication, and ride leader–specific controls, and applied mitigations, **minimizing potential attack vectors** by approximately 30% and strengthened platform reliability.