Chandra Pavan Reddy Chada

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EDUCATION

Master of Science in Software Engineering Jan 2022 – Dec 2023
San Jose State University, San Jose, California, US

TECHNICAL SKILLS

- **Programming and Scripting:** Python, C/ C++, Java
- ***Web Technologies and Tools:*** JavaScript, TypeScript, React, Next, Angular, Vue, Nodejs, Webpack, HTML, CSS/SCSS, SASS/LESS, Bootstrap, REST API, Postman, Junit, Jest, .Net, PHP, Redux
- ***ML & AI:*** LangChain, RAG, LLMs, NLP, PyTorch, TensorFlow, Scikit-learn, Hugging Face Transformers
- ***Developer Tools and Cloud Technologies:*** CI/CD pipelines, Kubernetes, Jenkins, Git, Docker, Requirement Analysis, JIRA, Lifecycle (SDLC), Software Design, microservices, AWS (S3, RDS, VPC, EC2, ELB, CDK, Lambda, Serverless, IAM), Agile
- ***Networking & System Administration:*** Linux/Unix, TCP/IP, HTTP/s, DNS, OSI Model, Routing, Switching, LAN/WAN, Firewall Configuration, Network Troubleshooting Tools (traceroute, iperf, dig, CURL, Wireshark), Load Balancing, VPNs
- ***Database:*** SQL, NoSQL, PostgreSQL, MongoDB, Non-relational and Relational database systems (RDS), JSON, YAML

PROFESSIONAL EXPERIENCE

Full Stack Engineer - Xnode.ai, US July 2024 - Present

- Engineered API-driven **AI Agents** using **Python** and **LLMs**, enabling automated decision-making and intelligent data retrieval through **LangChain** and **Graph RAG**, significantly improving knowledge representation and AI-driven workflows.
- Integrated **agentic Retrieval-Augmented Generation (RAG)** with **PG Vector** and **LangChain**, optimizing semantic search and vectorized data retrieval by leveraging **OpenAI APIs**, prompt engineering techniques, and document loaders.
- Architected and delivered a **GenAI-powered** application using **Angular**, **TypeScript**, **PrimeNG**, **Material UI**, **Angular Messaging Services (Pub/Sub)**, and **Redis**, enhancing responsiveness within a 3-tier web application architecture.
- Used AI-driven coding tools like **Cursor**, **Windsurf,** and **VSCode** with **AI extensions** to boost development speed, improve code quality, and streamline debugging with smart suggestions and auto-completions.
- Authored and optimized **GraphQL** APIs to streamline communication between front-end and back-end systems, reducing unnecessary payloads and boosting response times by leveraging **HTTP/3** protocols.

Software Engineer - Oriana Software Solutions, US Aug 2023 – July 2024

- Delivered a scalable, reusable **RESTful API** web service with a **React** front-end and **Python FastAPI** back-end, ensuring fault-tolerant client-server communication using **HTTP protocols** and improving data retrieval efficiency.
- Crafted a responsive **UI** using **React**, **Tailwind CSS**, and **Redux** for state management, implementing cross-browser compatibility through **BrowserStack**, and ensuring stateless UI components within a 3-tier architecture.
- Constructed and secured a robust back-end using **Flask** with efficient **API** endpoints, **JWT-based authentication**, and secure database connection to process and store sensitive data, aligning with best practices in cloud computing and virtualization.

Software Developer - Virtu Tech Solutions, India Jan 2020 – Jan 2022

- Spearheaded the development and launch of a responsive, user-friendly **e-commerce** platform using **React**, **Redux**, **jQuery**, and **TypeScript**, resulting in a 35% increase in customer engagement while ensuring cross-browser compatibility and design.
- Created back-end services using **Java**, **Node.js,** and **Go**, developing **RESTful APIs** for real-time data exchange over **TCP/IP protocols**, improving data retrieval efficiency by 50%, and enhancing server performance.
- Conducted comprehensive testing with **Jest**, **Enzyme**, and **Go's** built-in testing framework, achieving 90% code coverage to ensure high-quality, maintainable code while enhancing troubleshooting and debugging efficiency.
- Automated **CI/CD pipelines** using **AWS** CodePipeline, **CodeBuild**, and **Docker** for automated testing and deployment of **React** and **Go-based** applications, achieving a 40% reduction in deployment times and enabling **CD** while maintaining **99.9%** uptime.

RESEARCH AND PROJECTS

Kirana.ai *(Next.js, TailwindCSS, Python, FastAPI, llama, whisper, phidata)*

- Developed a **Gen-AI** voice-activated inventory management system for Kirana shops using **Next.js** and **FastAPI**, integrating **Whisper-large-v3-turbo** for multilingual voice transcription, offering natural voice commands in regional languages.
- Integrated open-source **LLM** model **Llama-3.3-70b-versatile** from **Hugging Face** for **NLP** workflows, deployed on **Groq Cloud** for compute acceleration, and used **Phidata and Langchain** for creating, deploying, and managing **AI agents**.

ChessMaster *(NextJS, AI, TailwindCSS, Python, Flask, Stockfish)*

- Introduced real-time move analysis using **Next.js** and **Python** by plugging in the **AI Stockfish** engine, allowing users to receive the best move suggestions, which significantly enhanced the interactive gameplay experience.
- Launched the ChessMaster application on **AWS**, utilizing **EC2** for scalable hosting and **S3** for efficient storage.

Role-Based Access Control (RBAC) Management System *(Angular, Nodejs, PostgreSQL, Amazon RDS)*

- Engineered a **Role-Based Access Control (RBAC)** system using **Angular**, **Node.js**, and **PostgreSQL**, delivering fine-grained permission management, **AuthN**, and **AuthZ,** and reducing access management time by 40%.
- Constructed secure **RESTful APIs** with robust authentication and supporting complex user-role-permission relationships.