

Anish Kamatam

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Education

- Chico State University**, BS in Computer Information Systems Expected May 2027
- **Coursework:** Programming and Algorithms I, Programming and Algorithms II, Information Systems Design, Data Structures and Algorithms
- Chico State University**, Bachelor of Business Administration Expected May 2027
- **Coursework:** Financial Accounting, Managerial Accounting, Survey of Finance, Business Law, Survey of Marketing

Technologies

Languages: C++, Java, SQL, JavaScript, Python, HTML/CSS, Typescript, SQL (MySQL, PostgreSQL)

Tools & Platforms: Git, Github, Docker, MongoDB, Docker, Kubernetes, Colab, AWS

Libraries & Frameworks: React, Next.js, Node.js, TypeScript, Flask, Tailwind CSS, Pandas, NumPy, OpenAI

Experience

- Software Engineer Intern**, TraceCloud – San Jose, CA May 2024 – Aug 2024
- Investigated real-time data and application logs, identifying **3+ critical performance bottlenecks** and resolving **100%** of logged issues
 - Assisted in designing and implementing **automated testing frameworks**, reducing regression testing time by **40%** using **Selenium IDE** and **Webdriver**
 - Lead a team of **4** interns and executed over **150+ test cases** across platforms, improving cross-platform reliability
- Product Development Researcher**, TraceCloud – San Jose, CA May 2024 – Aug 2024
- Evaluated **5+ front-end libraries**, including **Mermaid.js** and **Joint.js+Rappid**, to identify scalable solutions for dynamic diagramming features.
 - Developed **3 proof-of-concept (POC)** prototypes replicating key features of Google Flowcharts API, reducing planned development time by **30%**.
- Founder & Lead Software Engineer**, MedWise – Mountain House, CA April 2025 – Present
- Architected and built a full-stack system using **Next.js, React, Flask**, and **Neo4j AuraDB**, integrating a **knowledge graph** with over **300+ drug nodes** and **550+ relationships**.
 - Designed a **GraphRAG system** combining **Hugging Face LLMs** and medical datasets to answer drug alternative queries with structured reasoning.
 - Integrated and fine-tuned **Gemini Vision** on **100+** prescription images to extract key medication details, reducing manual input time by **70%**.

Projects

- Disaster Response Agent System | Multimodal Voice-to-Agent Framework** 2025
- Developed a voice-driven disaster response system with **4 autonomous agents** (Fire, Medical, Police, NGO), coordinating actions using a centralized dispatcher and the **Model Context Protocol (MCP)**; integrated **6+ external APIs** (ElevenLabs, DeepL, Google Maps, Apify, Perplexity Sonar Pro) to enable real-time transcription, translation, routing, and geospatial mapping across dynamic emergency scenarios.
 - Tools Used: Node.js, JavaScript, Express, REST APIs
- Graph-RAG Semantic Retrieval for Brand-to-Generic Drug Mapping | MedWise** 2025
- Utilized a **graph-based Retrieval-Augmented Generation (RAG)** approach, combining semantic vector search with a **Neo4j knowledge graph** to model relationships between drugs, classes, manufacturers, and side effects for accurate and explainable recommendations.
 - Tools Used: Next.js, React, TypeScript, Tailwind CSS, Flask, Neo4j, Pinecone, HuggingFace API, Gemini Vision
- S&P 500 Closing Price Predictor using Recurrent Neural Networks** 2024
- Designed and implemented an LSTM-based model to predict the daily closing prices of the S&P 500 index using historical stock data. Optimized model training and evaluation using **TensorFlow** and **Keras**, achieving improved accuracy and efficiency through **hyperparameter tuning** and **data normalization** techniques. Achieved a Mean Absolute Error (MAE) of **1.2** and a Root Mean Square Error (RMSE) of **1.8**.
 - Tools Used: Python, NumPy, TensorFlow, Keras