Kashyap Tanuku

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Education

Rutgers University-NB — New Brunswick, NJ
Bachelor of Science in Computer Science & Mathematics — *Sep 2022 – Dec 2025*

Experience

blaZop | Software Engineer Intern — June 2024 – September 2024
Angular, ChromaDB, Docker, Flask, Python, Node.js

- Created a full-stack assistant chatbot that streamlines user-service interaction for **10+** large enterprise clients utilizing Angular.
- Engineered custom AI agents to generate a training dataset of **2900+** instances based on blaZop's user guide.
- Fine-tuned a Llama 3 model using the generated dataset and implemented a custom RAG workflow for context-aware responses to serve as assistant chatbot backend using AI Agents and ChromaDB.
- Designed and implemented a vector database search engine enabling querying of **1000+** blaZop architecture templates with **<1** second search times, streamlining product/service selection for clients using ChromaDB and OpenCLIP image embedding.

First Move Partners | Software Engineer Intern — May 2023 – August 2023
React, Express.js, Node.js, MongoDB

- Created a full-stack prototype of a login page and an admin dashboard for client presentation using the MERN stack and by following Agile methodology.
- Engaged in biweekly client meetings, to update prototype to align with client specifications and gaining experience with client interaction.

Relevant Coursework

Artificial Intelligence, Data Science, Data Structures & Algorithms, Combinatorics, Graph Theory, Cryptography, and Computer Architecture.

Projects

SVD Movie Recommender System | *Python, NumPy, Pandas, Matplotlib*

- Developed a Singular Value Decomposition recommender algorithm that gives movie recommendations to a user based on watch history with a **0.92 precision** and a **0.96 NDCG**.
- Created a movie rating prediction system that predicts ratings for unwatched movies of a user based on watch history with a **0.87 RMSE** and a **0.67 MAE**.
- Curated and cleaned a data set with **100,000+** user ratings

A* Path Finding | *Python, Matplotlib, NumPy*

- Implemented 5 different variations of A* search algorithm from scratch, achieving optimal path calculation in 101x101 grids with obstacles.
- Developed an interactive visualization interface to compare the efficiency and path taken by the algorithm from a starting point to an ending point.
- Optimized the algorithm by implementing a custom binary heap and creating custom heuristics that lowered node exploration and improved run time by **20%**

YouTube Music Clone | *AWS, React, Express.js, Python, RapidAPI*

- Led a team of 3 to develop a full-stack YouTube Music clone enabling users to search, play, download, and upload music.
- Created a secure login, sign up, and user profile system so users can save playlists and songs.
- Implemented a cosine similarity vector search algorithm to optimize search results to more closely match user queries.

Technical Skills

Languages: Python (spaCy, NumPy), Java, JavaScript (GSAP), TypeScript, C/C++, HTML/CSS, Dart, Assembly
Frameworks: React, Angular, Flask, Flutter, Next.js, Node.js, Express.js, Selenium, Tailwind CSS, Bootstrap
Developer Tools: Docker, ChromaDB, MongoDB, AWS, Firebase, Azure, Bitbucket, Git