Manoj Narender

Authorized to work in the USA with a J-1 Visa until Dec-2025

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EDUCATION

National University of Singapore   **Aug 2022 – Present**
Bachelor of Computing in Computer Science (Hons), Second Major in Quantitative Finance

WORK EXPERIENCE

AI Engineer Intern, Seekeasy (San Francisco, NOC Silicon Valley Program)   **Jan 2025 - Present**
- Developed user personalization for search infrastructure using **OpenSearch** and **KNN**.
- Performed **Residualization** on social media data embeddings and applied **K-means clustering** for deeper content and user insights.
- Fine-tuned the **custom embedding model**, improving relevance, and optimised it using a **caching** layer.
- Built an automated creator sourcing and classification pipeline leveraging **web scraping frameworks** and **LLMs**.
- Automated several workflows using **AWS CloudFormation** and **Lambda Functions**.

Software Intern (Video Analytics), Kabam Robotics   **May 2024 – Aug 2024**
- Designed and implemented the "Ask-AI" feature using **ROS**, **Flask**, **AWS**, **PostgreSQL,** and **Docker,** enabling robots to perform object detection and inference, thus automating manual facility management.
- Fixed a crucial bug that improved the reliability of Overcrowding Detection by the Video Analytics Engine.
- Benchmarked the latest Gen AI models such as **GPT 4-o**, **Grounding Dino,** and **YOLO World** on custom datasets to improve the robot's computer vision functionalities.

Backend Lead, Raffles Hall Developers   **Aug 2023 – Apr 2024**
- Built the backend for the Raffles Hall Website and managed the Raffles Hall App operations for over 700 residents.
- Led a team of 20 developers to develop an automated internship application system.
- Organized programming workshops (85% turnout) and an Inter-Hall Hackathon, reaching 120 participants.

PROJECTS

Flair AI (AI For Good Hackathon San Francisco First Place)   **March 2025**
- An intelligent essay grading tool using **Gemini, React, Tailwind CSS, TipTap, and FastAPI**, featuring rubric-based AI grading, live performance metrics, advanced grammar checks, and historical error tracking.
- Integrated an AI voice agent using **Brainbase**, enabling students to engage with their feedback through voice-based queries and clarify grading decisions for a more interactive learning experience.

FocusPal (HackDavis 2025 Most Technically Challenging Hack)   **April 2025**
- Built a real-time focus tracking app with **Next.js**, **WebSockets, MTCNN** and **OpenCV** for eye, head angle and blinking detection.
- Dynamically generated personalized study content using **Gemini** (videos, interactive games, flashcards) based on live focus detection.

Blochange (AIDF/Franklin Templeton Blockchain Pitchnight Finalist)   **Nov 2024**
- Developed a **Polygon** blockchain-based platform that ensures transparency in charitable giving through immutable records and automates fund distribution based on a donor voting system.
- Engineered the web app using **Next.js, Tailwind CSS, MongoDB, Ether.js,** and **Solidity.**

Hang   **Jan 2024**
- Developed a **cross-platform mobile app** using **React Native, Flask, Langchain,** and **MongoDB.**
- Built a recommendation engine that leverages **Llama 3.1** Model, user profiles, and Yelp API data to curate activities and food options catered to user preferences.

SKILLS

- **Programming Languages:** Python, Java, C, JavaScript
- **Web Development:** React, React Native, TypeScript, HTML, CSS, Flask, Node.js, Express.js, Next.js, Tailwind CSS
- **Machine Learning/AI:** OpenCV, PyTorch, NumPy, Pandas, YoloV8, Matplotlib, SciKit-Learn, Seaborn
- **Others:** PostgreSQL, MongoDB, Firebase, GCP, AWS, Docker, BeautifulSoup, Selenium
- **Languages and Non-Technical skills:** English, Tamil, Agile Workflow, Jira
- **Certifications:** Stanford Algorithms Specialization, Stanford Machine Learning, Java Programming