

Manoj Narender

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A software engineer passionate about leveraging technical skills to solve non-technical real-world problems, creating innovative solutions that enhance everyday life.

EDUCATION

National University of Singapore

Aug 2022 – Present

Bachelor of Computing in Computer Science (Hons), Second Major in Quantitative Finance

WORK EXPERIENCE

Software Intern (Video Analytics), Kabam Robotics

May 2024 – Present

- 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 crucial bug that improved reliability of Overcrowding Detection by Video Analytics Engine.
- Benchmarked latest Gen AI models such as **GPT 4-o**, **Grounding Dino** and **YOLO World** on custom datasets to improve the robot's current computer vision functionalities.
- Wrote thorough documentation and performed extensive testing on robots to enhanced reliability of the code base.

Backend Developer Intern, Spot Future Technologies

May 2023 – Aug 2023

- Developed APIs using **NodeJS** for DijoMatrix, a low-code platform for building business applications.
- Worked on transition from outdated **SQL** Database to **NoSQL** database using **MongoDB** improving scalability
- Acquired project management skills from working in a lean and efficient start-up team.

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 the development of an Automatic Internship Application software, showcasing leadership in innovative project management and execution.
- Organized Programming Workshops for Residents and secondary school students with a 85% turnout rate and Inter-Hall Hackathon for 9 NUS Halls & Residential Colleges with an outreach of 120 people.

PROJECTS

[Hoopify](#)

May 2023 – Aug 2023

- Developed a **cross-platform mobile app** using **React Native** with **Flask** for the backend.
- Integrated **OpenCV** and **YoloV8** model for **computer vision** to analyse user-uploaded basketball videos and provide shooting performance analytics, including specific data for different court areas, a leaderboard system and tracking across multiple workout sessions.

[Hang](#)

Jan 2024 – Feb 2024

- Developed a **web app** using **React** with **NodeJS** for the backend and **MongoDB** as a DBMS.
- Built a recommendation engine that leverages user profiles and data from the Yelp API to curate activities and food options for users catered to their likings.

[Descent AI](#)

Aug 2024 – Present

- Engineered a platform to practice AI/ML technical interview questions using **React JS**, **Tailwind CSS**, **Node JS**, **Mongo DB** and **Docker**.
- Built Tools that allow you to visualise different machine learning algorithms and concepts.

SKILLS

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