SURYAANSH RATHINAM

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PROFESSIONAL SUMMARY

Full-stack developer and AI Engineer with a passion for building intelligent, scalable applications using modern web frameworks and cloud technologies, and database systems. Strong expertise in implementing production-level AI solutions including LLMs and computer vision systems, with comprehensive knowledge across the development stack from frontend and backend frameworks to distributed systems.

EDUCATION

National University of Singapore   **Aug 2024 - Dec 2025**
Masters of Computing (AI Specialization)   GPA: 4.63 / 5
- Teaching Assistant: Cloud Computing

Manipal Institute of Technology   **Sep 2020 - Jul 2024**
BTech, Computer Science Engineering   GPA: 9.47 / 10

SKILLS

- <u>Programming Languages</u>: Python, C, C++, Java, JavaScript, Typescript
- <u>Database Systems</u>: MongoDB, MySQL, Redis, Postgres, TypeORM, ChromaDB, Pinecone
- <u>Full-stack Development</u>: React, Next, Vue, Angular, Node, Express, Nest, PHP, Django, FastAPI.
- <u>Cloud and Devops</u>: AWS, Firebase, Git, Docker, GCP
- <u>Others</u>: Selenium, Appium, Excel

WORK EXPERIENCE

Asian Institute of Digital Finance – <u>Research Assistant Intern</u>   **Oct 2024 - Present**
- Working as a Full stack developer, on building 'Caesers' a platform for generating Credit Risk Assessment Reports leveraging Open AI's LLM, using **Django** for server and the **NextJS** for the client side of the application.

Moneyflo - <u>Full Stack Developer</u>   **Mar 2023 - Jun 2024**
- Implemented an **AI assistant** using OpenAI's GPT-4o model, seamlessly integrated into a dashboard, enabling clients to effortlessly extract deeper insights from data and make informed decisions increasing time spent using product by 25%.
- Utilized NextJS, Firebase on client side and utilized **NestJS**, **FastAPI** to build endpoints for application and **AWS S3, Lamba** and **EC2** were leveraged, to store and process large quantities of client data.

Indian Institute of Technology, Kharagpur - <u>Research Intern</u>   **Jun 2023 - Aug 2023**
- Developed and fine-tuned a pre-trained **U-Net** model for **image segmentation**, further trained on 300 ultrasound images, after cleaning and pre-processing data, and fine tuning the model to obtain an accuracy of **99.2%** for classification and identification of different regions of the kidney.

Ridecell - <u>Software Engineering Intern</u>   **May 2022 - Aug 2022**
- Employed in **QA and automation** team to test and debug API endpoints and mobile applications using **Python, Selenium, Pytest, and Appium**, managed test cases efficiently with **TestRail**.

PROJECTS

Distributed Maze Runner: A Fault-Tolerant Peer-to-Peer Game System (Link)   **Oct 2024**
Implemented **multi-threaded** server logic with dynamic server swapping for continuous operation, handling player crashes and asynchronous movements. Used **TCP/Java RMI** for reliable messaging and constructed a tracker-based player registry to enhance peer discovery and reduce system load, demonstrating fault-tolerance in gaming.

Document and Video Q&A RAG System (Link)   **Feb 2025**
A web app for uploading PDFs and YouTube videos, processing them into chunks, and interacting via chat using **RAG**. Uses MongoDB for document storage, **Pinecone** for vector retrieval, and **OpenAI API** for responses. Features include document/video processing, **vector storage**, and a **chat interface** for **querying**.

PUBLICATIONS

- Exploring IoT-Blockchain Integration in Agriculture: An Experimental Study - Published in IEEE Access (Link)
- Survey of the use of AI models and techniques in the analysis and prediction of neuro-degenerative diseases- Presented at AICECS 2023 and Published in IOP: Journal of Physics (Volume 2751) (Link)
- Analysis and Comparison of Different Frontend Frameworks- Presented at ATIS 2022 and Published in Springer's CCIS Series (Volume 1804) (Link)