
NATIONAL UNIVERSITY SINGAPORE

Computer Science

- **Overall Champion** of **Ripple, NUS Fintech Summit 2024 Hackathon**
- **Top Student** of IS1108, awarded by NUS, School of Computing
- Languages: Python, Java, JavaScript, Typescript, Solidity, C, C++
- Core Modules: Functional and Object-Oriented Programming Methodology, Discrete Structures, Algorithms and Data Structures, Information Security, Computer Networking

VICTORIA JUNIOR COLLEGE

GCE A Level | Rank Points: 90/90

- **90/90 (Full Distinction)** with **additional H3/S-Level Chemistry**
- Nominated and participated for **2019 Singapore Physics Olympiad**

PROFESSIONAL EXPERIENCE

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

Jan 2025 – Jun 2025 | AI Research Intern

- Implement **XAI** for time-series based Deep Learning model used for demand forecasting by Coca-Cola Singapore using **pyTorch** and **Nixtla** framework
- Automate client-facing voting system for projects to be developed in upcoming financial year using **NextJS**, **Prisma**, **MongoDB**
- Streamline API gateway for various AI model services using **RabbitMQ**
- Refactor Machine Learning model with common **architecture and design patterns** for production and handover to industry partners

SMARTKARMA

Feb 2023 – Jul 2023 | Data Analyst Intern

Testimonial: <https://virusrwj223.github.io/hm/>

- Usage of the **Bloomberg terminal** and open-source **BLPAPI API package** to streamline data retrieval using **Python programming language**
- Developed and maintained a data dashboard for the UX team, utilizing **PostgreSQL** to query the company database and **Excel** to visualize data using charts.
- Recommended website tracking strategies to the product team, utilizing the data collection tool **Google Analytics 4** to gather valuable insights
- Optimized the data dashboard for the research team, using **PostgreSQL** and **Google Looker Studio** to enhance data visualization and streamline client onboarding
- Automated the posting of company webinars using the platform's respective **APIs**, **Python**, and **Zapier**, resulting in increased webinar visibility and engagement
- Assisted colleagues in **web scraping** various financial news sites using **Python** for internal usage, enabling the research team to gather up-to-date information efficiently
- Automated weekly sales reports to CXO office using **Hubspot API**, **Python** and **SQL**

RESEARCH

- **Data driven frameworks for enhancing supply chain resilience**, shadowed under Dr Liu Ning (A*STAR)

SELF INITIATED PROJECTS

Oma

May 2024 - Current

Backend, Quality Assurance, DevOps lead | AI

- **Native** recommendation app that suggests dining places using AI to learn your preference
- Recommendation algorithm built using **PyTorch**
- Adapted **MERN** stack using **NEXT.JS** and **TRPC** on **Turborepo**
- **Playwright testing** framework for unit and integration test in managing Quality Assurance
- Native application and ML model hosted on **Microsoft Azure**

User guide: <https://docs.google.com/document/d/11SEPNa5Z1mEtLLBuoHdEIO-Y0rPrTm0plZOKLHMxr8/edit?usp=sharing>

BAR-E (previously BASA)

Dec 2023 - Jan 2024

Overall Team Lead and Tech Lead | Blockchain

- **Winning** submission for **Ripple, NUS Fintech Summit 2024 Hackathon**
- dApp that connects landlords and tenants through contracts on the **Ethereum blockchain**
- First iteration of project built in Summer 2023 found here: <https://virusrwj223.github.io/BASA/>
- Usage of **Solidity** to prepare contracts and **Python Brownie** framework to deploy contracts
- Usage of **React.js** to craft user interface

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Website: <https://www.hrishiraj.site>

LinkedIn: <https://www.linkedin.com/in/hrishiraj-mandal>