

# Ryan Loh Yong Rui

ryanloh@u.nus.edu | +65 8876 7773 | www.linkedin.com/in/ryanlohyr | www.github.com/ryanlohyr

## EDUCATION

---

### National University Singapore

Aug 2022 - May 2026

Bachelor of Engineering, Computer Engineering

## TECHNICAL SKILLS

---

**Programming:** JavaScript, Java, Python, C++, HTML, CSS, MySQL, C++, C#, C, Go, MongoDB

**Technologies:** AngularJS, ReactJS, NextJS, Docker, Firebase, Vim, Redux Toolkit, Amazon Web Service

## WORK EXPERIENCE

---

### Software Engineer Intern | GovTech Singapore

Jan 2024 - Present

- Initiated, developed and deployed microservices using **AWS Lambda and SNS** to allow enterprise users to create Jira Issues securely via FormSG.

### Software Engineer Intern | Core Invest Institute

Jul 2022 - Aug 2023

- Developed a financial chatbot using **Elasticsearch** and **GPT-4** for data-driven insights, leading to 80% decrease in original workflow time. Utilized **reranking** and **small-big retrieval** which led to **30% improvement of F1-Score**.
- Led the end-to-end development of all key pages within the stock application, from concept to implementation. Utilized **ReactJS** for the frontend and the **Flask** framework for the backend.

### Backend Engineer Intern | Core Invest Institute

Jan 2022 - May 2022

- Developed **Python** web scraper for 4000+ cryptocurrencies, extracting vital data for internal research.
- Increased in-house ranking system **accuracy** by **20%** through Integration Tests and database optimisations such as memoization in the **Flask** Framework for new/existing features, validating functionality and back-end quality.

## PROJECTS

---

### Technical Lead | Startr

Nov 2023 - Present

- **Within one month**, advanced from idea to the launch of an event networking application, utilizing **Socket.IO** for chat, **Next.js** for frontend, and **Flask** coupled with **MongoDB** for the backend.
- Application had over 100 sign ups and over 150 connections formed in the first two days.

### Software Engineer | Google Developer Student Clubs NUS

Aug 2023 - Present

- Spearheaded the development of key pages of our volunteer management system using **NextJS** and **Typescript**, using **Redux Toolkit** for state management and **RTK Query** for data fetching and caching.

### ByteDance x Orbital (Project for Bytedance)

May 2023 - Aug 2023

- Implemented an API Gateway using **Go** with service registry, discovery, and load balancing mechanisms for efficient request distribution among backend RPC Servers.

### NUSDeg (School project)

Aug 2023 - Oct 2023

- Led as the tech lead for the project in a team of four, spearheading system architecture and design.
- Architected and implemented a **topological sort algorithm** to create a degree scheduling recommender.

## HACKATHONS

---

### Hack and Roll 2024 (Winner)

Jan 2024

- Developed a **Real-Time Interactive Multi-Lingual Voice Agent** for Government related Information, integrating **Twiml**, **GPT**, **Pinecone**, and OpenAI's **text embedding model** to provide instant responses.

### ADA AI Hackathon 2023 (Finalist)

Sep 2023

- Engineered a language bot with **GPT** for grammar checking and **TensorFlow** recommenders to deliver tailored question recommendations. Integrating **Amazon EC2** and **Amazon RDS** for deployment.

### HackSingapore 2022 (Winner)

Jun 2022

- Formulated and developed a volunteer management system. Champions among 300 competing teams.