BENJAMIN CHRISTOPHER TOH

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EDUCATION

National University of Singapore **Aug 2021 – May 2025**

Bachelor of Engineering in Computer Engineering (Hons)

- Minor in Data Engineering
- CAP: 4.7/5.0
- **Relevant Coursework**: Programming Methodology (Python), Data Structures & Algorithms, Software Engineering & OOP, Introduction to Machine Learning, Computer Networks
- **Certifications**: SQL Fundamentals, EdX DevOps and Software Engineering Capstone

EXPERIENCE

Trilogy Technologies **May 2023 – Aug 2023**

Software Engineer Intern

- Designed and built backend architecture single-handedly with MQTT, Microsoft Azure IoTEdge and Functions to handle high volume data processing and scalability for an IoT monitoring system with 1K+ sensors.
- Developed a full-stack web application to visualise and analyse IoT data using React, Flask and PostgreSQL and adopted a Factory Method design pattern while achieving >95% unit test coverage.
- Prototyped a high precision indoor location coordinate system from scratch with Ultra-Wideband technology, ESP32 microcontrollers and a Python GUI.

PROJECTS

Trip Planner Web App, Trippin | *Self-initiated*

- Developed and deployed a full stack web app to allow users to plan trips for location-based and real-time collaborative planning using Next.js, Node.js, Express.js, MongoDB and Google Maps API.

Productivity Mobile App, Office Quest | *DSTA Code_Exp 2023 Hackathon Finalist*

- Developed a full stack mobile app to gamify employee experience with a gacha and reward tier system with React Native, Express, Node.js and MongoDB.
- Designed backend architecture and database design while implementing majority of REST API routes.

Community Mobile App, myKampung | *SUTD What the Hack 2022 Hackathon Winner*

- Achieved first place in this 48-hour hackathon with over 200+ participants.
- Developed a mobile app to allow residents of the same HDB block to connect with announcements and utility groups using React Native and Firebase

Shopping Platform App, Thriftr | *Self-initiated*

- Developed a mobile app in a small team of 2 allowing users to shop and sell second-hand clothes with a Tinder-inspired matching gimmick of swiping using React Native, Firebase and TailwindCSS.

SKILLS

Languages: Python, Java, C/C++, HTML/CSS, JavaScript, SQL, Golang
Database/Cloud: MongoDB, PostgreSQL, Microsoft Azure, Google Cloud
Technologies/Frameworks: React, React Native, Next.js, Flask, TailwindCSS, Node.js, Express.js, ThreeJS
Tools: Git/GitHub, Docker, Kubernetes, Figma

LEADERSHIP / EXTRACURRICULAR

Raffles Hall Volunteer Corp **Aug 2021 – Apr 2023**

Publicity Head *NUS*

- Organised a fundraiser as to raise funds for the beneficiary HCA which exceeded expected funds raised.
- Received the Merit and Campus Choice Awards for the annual NUS Student Life Award for the CCA through Project Rhino as a volunteer to tutor underprivileged children online.