

BENJAMIN CHRISTOPHER TOH

☎ 83382898 ✉ toh.benjamin@u.nus.edu [in linkedin.com/in/benjamin-chr-toh](https://www.linkedin.com/in/benjamin-chr-toh) [🌐 bentohset.dev](https://bentohset.dev)

EDUCATION

National University of Singapore

Aug 2021 – May 2025

Bachelor of Engineering in Computer Engineering (Hons)

- Minor in Data Engineering
- GPA: 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 Pub/Sub Messaging, Microsoft Azure IoT Edge 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

Food Recommender System, Go Eats | *Self-initiated*

- Developed a full stack food recommender system employing a microservice architecture, interconnecting services via gRPC and deployed as a Kubernetes cluster on Azure Kubernetes Service with Terraform.
- Trained a content-based filtering ML model with Scikit-Learn and to recommend similar restaurants according to reviews evaluated with TF-IDF which interacts with a Golang-based telegram bot.
- Developed a Next.js form and admin portal in TypeScript for user submission of reviews powered by a Golang REST API backend with PostgreSQL hosted on Azure Database.
- Engineered and collected restaurant review data by implementing a web crawler and scraper with Google Maps API, Scrapy and Selenium frameworks.

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 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

SKILLS

Languages: Python, Java, C/C++, HTML/CSS, JavaScript, SQL, Golang

Database/Cloud: MongoDB, PostgreSQL, Microsoft Azure, Google Cloud(Firebase)

Technologies/Frameworks: React, React Native, Next.js, Flask, TailwindCSS, Node.js, Express.js, ThreeJS

Tools: Git/GitHub, Docker, Kubernetes, Figma, Terraform(Familiar)

LEADERSHIP / EXTRACURRICULAR

Raffles Hall Volunteer Corp

Aug 2021 – Apr 2023

Publicity Head

NUS

- Led a team of 6 and organised a fundraiser as the Head of Publicity 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.