Wei Yang Hong

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Education

- **National University of Singapore(NUS)** — Singapore
  Bachelors in Engineering(Honours) Computer Engineering; Grade: Distinction — *Aug 2018 - May 2022*
  - **Teaching Assistant**: Taught sophomores the principles of software engineering: Module code 2113T
  - **Hackathons**: NUS Hack'n'Roll 2020/2021, Singapore CPF Hackathon 2020 runner up
- **Stanford University - Silicon Valley Exchange Program** — Palo Alto, CA
  Management Science and Engineering — *Jan 2021 - May 2021*

Experience

- **YipitData** — Mountain View, CA
  Software Engineer Intern — *Jan 2021 - Dec 2021*
  - **React/React Native**: Worked alongside QA engineers and UI/UX designers to develop an iOS/Android email application. Wrote the UI components needed via React Native and built upon existing/open-sourced native libraries written in Java/Swift for specific feature requests from users.
  - **Golang**: Designed and developed part of the back-end payment API for custom domain hosting via Godaddy and Stripe API
- **NUS Information Technology Winter Program** — Singapore
  Software Engineer Intern — *May 2020 - Dec 2020*
  - **Django/React**: Responsible for developing an automated IoT platform. Frameworks/tech stacks used: React for front-end development, Django for back-end. MySQL database. Cisco's Identity Service engine API and Postman for fetching the requests. Microsoft ADFS API single sign on authentication for NUS users.
- **NUS Information Technology Summer Program** — Singapore
  Software Engineer Intern — *Dec 2019 - Apr 2020*
  - **Python/React**: Responsible for developing a full-stack Wi-Fi analytics dashboard using IoT sensors. Wi-Fi data gathered is streamed to MySQL database. Linux bash commands for initial networking test on a Raspberry Pi. An in-depth technical article written by me, curated by "The Startup" on Medium explaining the tech stacks used as well as the developmental process:
    https://medium.com/swlh/building-an-automated-wi-fi-sensor-around-the-nus-campus-7f187524f58e

Notable Undergraduate Projects

- **Implementation of concurrency and software transactional memory on top of a javascript-like language**: Made use of Antlr's grammarV4 to create the necessary grammar required for parsing of interpreted langugage. Thereafter, concurrency logic is implemented after parsing to enable multi-threading and context switching of block statements in the interpreter. Software transactional memory via variable snapshots are used to prevent race conditions and unsafe read/writes instead of traditional lock approach via semaphores. Check it out:
  https://github.com/nus-cs4215/cs4215-project-2022-daroca
- **NUS module timetable group scheduler in telegram**: Developed a telegram bot to automatically schedule groups of timetables and find free timeslots available for a group meetup from just their weblink. Made used of API from nusmods and telegrambot. Check it out: https://github.com/MeLoveCarbs/NUSMODS-group-scheduler
- **Computer engineer capstone project**: This project is a culmination of what we have learned throughout our coursework as a computer engineering undergraduate and is usually taken in the final year. The project's goal is to develop a wearable device that predicts the dance move of the user using machine learning models and streams the data collected using socket programming into a web dashboard. My role for this project is a full-stack developer, and the architecture I used for front-end, back-end, and database were ReactJS, NodeJS, and MySQL. My main task includes an iterative design of a front-end dashboard consisting of user testing and feedback, a back-end server for HTTP APIs, designing the database schema, and socket programming via Socket.io library to provide real-time data from the database to the dashboard. Check it out: https://github.com/MeLoveCarbs/CG4002

Programming Skills

- **Languages**: Golang, Python, Javascript, C++, SQL, Java **Technologies**: AWS, React/React native, Echo