

# Omer Wai Yan Oo

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## EDUCATION

### Singapore Management University

Singapore

*Bachelor of Science in Computer Science*

*August 2020 – December 2023*

- On track to **Magna Cum Laude**
- **Teaching Assistant** for Collaborative Software Development (CS203)
- **Relevant Coursework:** Data Structures, Design and Analysis of Algorithms, Networks, Operating Systems, System Design, DevOps, Machine Learning, & Big Data Architecture
- Technology Executive at SMU Ellipsis, the student body for the School of Computing and Information Systems
- Honorary Finance Secretary of SMU Stereometa, the premier student DJ-ing collective in Singapore

## EXPERIENCE

### Software Engineering Intern

January 2023 - May 2023

*Grab*

*Singapore*

- Built an **internal data platform** and associated tooling in the Automated Scalable Insights team
- Migrated and overhauled a backend service responsible for the **automation and orchestration of various ETL workflows and visualisations** across business verticals at Grab; **from Express.js to Python FastAPI**
- Built features for data scientists and product leaders to visualise, collaborate and **derive actionable insights from metrics in real-time**
- Designed scalable systems using **AWS and Azure services** and contributed to **database design**

### Software Engineering Intern

May 2022 – August 2022

*Ox Street by Carousell Group*

*Singapore*

- Ox Street is a streetwear marketplace part of the **Carousell Group**, for new and used sneakers
- Developed a full overhaul of the main web application in NextJS with TypeScript React, working full-stack
- Built a **recommender system** using gathered user events to train a **machine learning model** which recommends similar products that other users view & like
- Implemented a pipeline for **internationalisation (i18n)**, translation management and automatic routing
- Followed best practices in phased development, writing unit tests and interaction tests with **Storybook**

### Data Science Intern

June 2021 – October 2021

*Ox Street by Carousell Group*

*Singapore*

- Implemented data visualisation, processing and conversion tracking with tools such as **Pandas** & Google Analytics
- Programmed a **price-monitoring service with Flask on Heroku** to gather up-to-date and accurate pricing data, allowing the number of accurate listings on the app to increase by over 100%

## PROJECTS

### Rupiks | *Flutter, Dart, C*

In Progress

- Developed a **cross-platform mobile application in Flutter** to solve a Rubik's Cube based off of camera input from the device with the use of computer vision techniques
- Integrated a **C Foreign Function Interface (FFI)** to solve any given Rubik's cube efficiently using Korf's Algorithm and pattern databases

### AngelOwl Loyalties | *Golang, Gin*

January 2023 - May 2023

- Built a **highly available application to process card transactions from banks and calculate reward points** for various transaction types and merchant categories, supporting customisable campaigns and exclusions
- Designed a scalable, highly available microservices architecture using multiple Golang containers and **Kafka for event-processing** and **etcd** as a distributed store
- Optimised the cloud-native application for high throughput, **processing millions of transactions in hours**
- Technologies used: **Golang, Kafka, Kubernetes, Docker, etcd, AWS**

## TECHNICAL SKILLS

**Languages:** Python, Java, C, TypeScript, Golang, C++, SQL, Dart

**Frameworks & Libraries:** FastAPI, React, gRPC, Node.js, Tensorflow, Pandas, Flutter, Express.js, Spring

**Tools:** Git, Docker, AWS, Google Cloud Platform, Azure, Heroku, MongoDB,  $\text{\LaTeX}$

**Certifications:** Oracle Certified Foundations Associate (Java)