

# 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
- Honorary Finance Secretary of SMU Stereometa, the premier student DJ-ing collective in Singapore

## EXPERIENCE

### Software Engineering Intern

January 2023 - May 2023

*Grab*

*Singapore*

- Grab is South East Asia's first decacorn; a super-app which provides users transport, deliveries and payments
- Built an **internal data platform** and associated tooling in the Automated Scalable Insights team
- Led the migration and overhaul **from Express.js to Python FastAPI** for a backend service that **automates and orchestrates various ETL workflows and visualisations** across business verticals
- Built features for data scientists and product leaders to visualise, collaborate and **derive actionable insights from metrics in real-time**, using Flutter
- Designed scalable systems using **AWS and Azure services** and contributed to **database design**

### Research Assistant

Aug 2023 - Present

*National University of Singapore*

*Singapore*

- Sole developer working on **fine-tuning ML models to process thousands of hours of audio** for Automatic Speech Recognition, Sentiment Analysis, Named Entity Recognition, Pseudonymisation, and Feature Detection
- Supporting medical researchers from the School of Medicine at NUS to implement a machine learning pipeline for **Natural Language Processing** on Student volunteers' reflections about their cognitive performance
- Technologies used: **Python, Linux, Pytorch**

### 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 **ML recommender system** for similar products based on users' likes and views
- 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

### AngelOwl Loyalties | *Golang, Kafka, Kubernetes, CassandraDB, Serverless, AWS*

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 on **AWS EKS and Lambda** using multiple containerised Golang services, **Kafka for event-processing** and **etcd** as a distributed store
- Optimised the cloud-native application for high throughput, **processing millions of transactions in minutes**

## TECHNICAL SKILLS

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

**Frameworks & Libraries:** FastAPI, Spring Boot, React, gRPC, Node.js, Tensorflow, Pytorch, pandas, Flutter

**Tools:** Git, Docker, Postgres, Amazon Web Services, Google Cloud Platform, Azure, Kubernetes, MongoDB,  $\text{\LaTeX}$

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