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 building models for Automatic Speech Recognition, Sentiment Analysis, Named Entity Recognition, Pseudonymisation, and Feature Detection
- Supported 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, Pytorch, Transformers, HuggingFace**

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, LaTeX
Certifications: Oracle Certified Foundations Associate (Java)