

## Experience

### Software Engineer at Shopee

Sep 2024 – Present

- Implemented DR codex module for comprehensive triaging of data infrastructure middleware issues to enable disaster-readiness of company-critical data workflows
- Developed core features for data governance such as rule-checking, triggers and customized alerts
- Provided technical support for 5000+ DAU internal products, including documentation, design specs and API schemas

### Software Engineer at Knovel Engineering

Jan 2024 – Aug 2024

- Prototyped browser extensions for dynamic web scraping with LLMs and automated remote browser tasks with Puppeteer
- Deployed full-stack applications (LLM chatbot, legal case assessment software) to proprietary and public cloud platforms
- Integrated and benchmarked proprietary and open-source solutions for speech transcription and speaker diarization

### Software Engineering Intern at Fabrica.AI

Oct 2022 – Apr 2023

- Designed self-hosted CI/CD workflow for building, testing and releasing Robot Operating System (ROS) software with Jenkins
- Refactored build systems, Makefiles and local scripts to enhance developer productivity

### Software Engineering Intern at LUMIQ

Jun 2022 – Aug 2022

- Migrated self-managed plugins to support new Kubernetes versions on AWS EKS
- Prototyped Google Apps Script add-ons to make portfolio optimizer features accessible from Google Sheets

### Software Engineering Intern at Netatech Engineering

May 2021 – Aug 2021

- Implemented resource usage, irrigation schedule and environmental sensor data visualizations for indoor farms with Plotly.js
- Deployed serverless functions for remote device control with MQTT and AWS IoT Core

## Education

### Singapore Management University

*BSc Computer Science (Artificial Intelligence Track)*

Aug 2019 – Dec 2023

- GPA: 3.7 / 4 (Magna Cum Laude)
- Recipient of SCIS (School of Computing and Information Systems) Achievements scholarship
- Dean's List: AY2019-2020 (Year 1), AY2020-2021 (Year 2)

## Projects

### CoastalClear ([Github](#), [feature](#), [media coverage](#))

Jun 2024

- Web application that leverages historical data and live feedback for efficient and coordinated cleanups in coastal areas
- Awarded as a finalist among 19 teams with \$20,000 funding and further development in an accelerator programme

### ScamSword ([Github](#))

May 2023

- Prototyped proof-of-concepts for scam-prevention measures in collaboration with Open Government Products (OGP)
- *Site inspect* analyzes URL, website DOM, and favicon to generate a comprehensive risk report
- *Scam chat* feature facilitates anonymous chat sessions through Telegram APIs

### SourC-VM ([Github](#))

May 2023

- Compiler and virtual machine that targets a subset of the C programming language
- Supports compilation errors, type-checking, conditionals, loops, and stack and heap visualizations for debugging

### Spend Transactions ([Github](#))

Nov 2021

- Full-stack web application that ingests transactions, processes rewards for credit card expenditure and displays them to users
- Automated infrastructure provisioning with CloudFormation and build releases with Github Actions

## Activities

### Volunteer at Better.SG

Aug 2022 – Dec 2024

- Providing tech helpdesk and consulting services for nonprofits looking to improve digital workflows

### Teaching Roles at Singapore Management University

Jan 2021 – Dec 2023

- TA for Linear Algebra, Object-Oriented Programming, Computer Hardware and Embedded Systems, and DevOps mods
- Composed practice and review materials to prepare juniors for major programming lab tests

## Skills

**Languages:** English, Mandarin (All Native)

**Programming:** **Web frontend** (HTML, CSS, Bootstrap, React), **Web backend** (Spring, FastAPI, Flask, ExpressJS, ASP.NET), **Message Brokers** (Kafka, RabbitMQ), **Databases** (MySQL, PostgreSQL, ClickHouse, DynamoDB, Redis), **Containers** (Docker, Kubernetes), **Cloud** (AWS, Azure, GCP), **DevOps** (Gitlab CI, Jenkins, Grafana, Prometheus), **IaC** (CloudFormation, Terraform), **Data Science** (Pandas, Numpy, Jupyter, Plotly), **ML** (PyTorch, TensorFlow), **Tooling** (Git, Bash, Powershell, Linux/UNIX)