

Experience

Shopee – Software Engineer

Sep 2024 – Present

- Implemented DR codex module for comprehensive triaging of data infrastructure middleware issues to ensure disaster-readiness of company-critical data workflows.
- Integrated additional rule-checking and custom alert triggers into ETL task scheduling system in line with data governance policies.
- Enhanced service stability by migrating from unmaintained 3rd party services to self-managed alternatives, and using observability tools to tune application parameters and resolve performance bottlenecks.
- Provided technical support for internal products with 8000+ DAUs including updating documentation, design specs and API schemas.

Knovel Engineering – Software Engineer

Jan 2024 – Aug 2024

- Prototyped browser extensions for dynamic web scraping with LLMs and remote dispatch of 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.

Fabrica.AI – Software Engineering Intern

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.

Education

Singapore Management University – BSc Computer Science

Aug 2019 – Jan 2024

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

Raffles Institution – Integrated Programme and A-Levels

Jan 2010 – Dec 2015

Projects

Developer guides

Jun 2022 – Present

Creating and maintaining cheatsheets, references and guides for learning about programming languages, application frameworks, developer tooling and workflows.

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

May 2024 – Jul 2024

Web application that integrates historical data and live feedback with an interactive map interface for efficient and coordinated cleanups in coastal areas. Awarded as a finalist among 19 teams with \$20,000 funding and further development in an 8-week accelerator programme.

ScamSword

Feb 2023 – May 2023

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

SourC-VM ([GitHub](#))

Feb 2023 – May 2023

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

Spend Transactions ([GitHub](#))

Aug 2021 – 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

Better.SG – Volunteer

Aug 2022 – Dec 2024

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

Singapore Management University – Teaching Roles

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*)