

Experience

- Shopee** – Software Engineer Sep 2024 – Present
- Implemented DR codex module to monitor and triage data infrastructure middleware issues and ensure disaster-readiness of company-critical data workflows.
 - Integrated rule-checking and custom alert triggers into ETL task scheduling system in line with data governance policies.
 - Expanded Dashboard platform capabilities to support AI-assisted data exploration and analysis with snapshots, and dynamic query acceleration for semantic models.
 - Enhanced service stability by migrating from unmaintained 3rd-party dependencies, improving resource management and monitoring for compute-intensive tasks, and tuning application parameters with the help of live profiling tools.
 - Responded to live incidents, resolved user issues, and maintained documentation, guides and API contracts to support operations of an 8000+ DAU data analytics platform

- 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.
 - Architected and 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. Selected as 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. Supports compilation errors, type-checking, conditionals, loops, and debugger visualizations for the stack and heap.

Activities

- Better.SG** – Volunteer Aug 2022 – Dec 2024

- Provided 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 modules.
- 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*)