

Experience

- Software Engineer at Shopee** Sep 2024 – Present
- Implemented DR codex module for efficient diagnosis and resolution of issues with data infrastructure middleware and to enable disaster-readiness of critical data workflows
 - Developed core features for governance and monitoring such as rule-checking, trigger conditions and custom alert messages
 - Published user-facing guides, technical design documents and OpenAPI schemas for Scheduler and SLA system modules
- 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 vendor-specific and 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 deploying 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
 - Deployed an Apps Script add-on as a proof of concept 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** Aug 2019 – Dec 2023
BSc Computer Science (Artificial Intelligence Track)
- 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
 - Conducted 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
- Courses: Linear Algebra, Object-Oriented Programming, Computer Hardware and Embedded Systems, DevOps
 - 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), **Big Data** (Hadoop, Spark, Flink, Presto), **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)