

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

Programming: Python, Java, JavaScript, SQL, Frontend (*HTML, CSS, Bootstrap, React*), Backend (*Spring, FastAPI, Django, ExpressJS, ASP.NET, RabbitMQ, Redis*), Databases (*MySQL, PostgreSQL, MongoDB, DynamoDB*), Big Data (*Kafka, Hadoop, Presto, ClickHouse*), Cloud & Infrastructure (*AWS, Azure, GCP, Docker, Kubernetes, CloudFormation, Terraform*), DevOps (*Gitlab CI, Jenkins, Grafana, Prometheus*), Data Science & ML (*Pandas, Numpy, Jupyter, Plotly, PyTorch, TensorFlow*), Tooling (*Git, Bash, Powershell, Linux/UNIX*)