

MA NINGZHI

[LinkedIn](#) | [GitHub](#) | [Portfolio](#)

EDUCATION

SINGAPORE MANAGEMENT UNIVERSITY

Aug 2018 – Dec 2023

Bachelor of Science in Information Systems - Magna Cum Laude

Master of Science in Computing - Software & Cyber-Physical Systems Track

Jan 2024 – Dec 2024 (Expected)

WORK EXPERIENCES

SINGAPORE MANAGEMENT UNIVERSITY - NARWHAL FINANCIAL SYSTEMS PTE. LTD.

Jan 2024 – Jul 2024

Research Assistant (Narfin Banking System Migration)

- Developed 85+ new APIs and improved 50+ APIs for Narfin Core Banking System using OutSystems, covering a wide range of functionalities including transactions, authentication, and system management.
- Guided 2 Project Teams developing the Retail Internet Banking and Teller application. Supported the system as it was being used in the teaching of courses including IS444 Digital Banking Architecture.
- Migrated and enhanced the Administrator Application from Vue.js, Java Server Page, MySQL to OutSystems.

GOVERNMENT TECHNOLOGY AGENCY

May 2022 - Aug 2022

Software Engineer Intern

- Updated primary keys in Microsoft SQL databases with Java, impacting 36+ million rows across 48 tables.
- Collaborated in a scrum team to seamlessly propagate these changes from Backend to Frontend, from the Dev Environment to Staging, then to the Production Environment.
- Automated user management in Red Hat Identity Management using Shell Scripting.

RAFFLES INSTITUTION BOARDING, RAFFLES INSTITUTION

Oct 2021 – Current

Residential Assistant

- Accountable for managing the Raffles Boarding Program and overseeing the well-being of over 60 boarders in the block.
- Received the MOE Inter-Hostel Competition 2024 Heart Award in recognition of the years of dedication and excellence in service as the residential assistant.

PROJECTS

IS617 M.Sc. Capstone Project: Multi-tenant Real-time General Ledger System

May 2024 - Nov 2024

- Independently migrated a legacy General Ledger system from outdated JavaScript and MySQL to a modern service-oriented architecture using OutSystems.
- Designed and implemented a custom concurrency management solution to ensure data integrity.
- Streamlined integration with the core banking system for a cohesive banking application ecosystem.

IS484 IS Project Experience: Narfin Core Banking System Migration

Mar 2023 – Nov 2023

- As the project manager, led a team in migrating the banking system from TIBCO Business Work to OutSystems, designing and deploying 85 REST APIs.
- Migrated an API demo web application from vanilla JavaScript and JSP to OutSystems.
- Reduced the annual cost by 50% of S\$10,000 with improved system maintainability, scalability, and resilience.

IS708 Mobile and Distributed Systems (PhD Course): [Multi-layer Authentication](#)

Mar 2023 – Apr 2023

- Developed an Android Application using Java to record, store and transmit voice and inertial measurement unit data.
- Trained multi-class machine learning models using Python and incorporated them as a backend service to authenticate users based on voice and inertial measurement unit data.
- Integrated the Android Application with the backend service via websocket, ensuring seamless communication between two layers.

SKILLS

Professional Certification: [Google IT Support Specialisation](#), [Google Project Management Specialisation](#), [Oracle Java Certified Foundations Associate](#)

Programming Languages: Python, Java, Go, SQL(MySQL), MongoDB, Shell Scripting, HTML, JavaScript, CSS

Softwares: Docker, Kubernetes, RabbitMQ, OutSystems, [Salesforce Superbadges](#)

Languages: Effectively bilingual in English (A for "A" Level General Paper) and Chinese (Native Speaker)