

# MA NINGZHI

Email: [ningzhi04@hotmail.com](mailto:ningzhi04@hotmail.com) | Mobile: +65 9238 5972 | [LinkedIn](#) | [GitHub](#) | [Portfolio](#) | Singapore Citizen

Graduate in Software Engineering and IT Transformation with expertise in system migration, cloud strategy, and enterprise architecture. Skilled in low-code (OutSystems) and traditional programming (Java, Python), designing scalable APIs, and optimizing backend performance. Passionate about leveraging technology for digital transformation, innovation, and operational efficiency.

## EXPERIENCES

---

### NARWHAL FINANCIAL SYSTEMS PTE. LTD. (Narfin, a commercial venture spinoff from SMU) May 2023 – Current

#### *Narfin Core Banking System, Software Engineer Intern, Part-time Internship*

- Led the migration of the Narfin Core Banking System from TIBCO Business Work, Java, and MySQL to OutSystems, deploying 85 REST APIs. Reduced annual maintenance costs by 50%.
- Designed and deployed 90+ new APIs and optimized 50+ APIs for the core banking system, covering functionalities like transactions, authentication, and system management.
- Migrated and enhanced the Administrator and the API Demo apps from a wide range of tech stacks (e.g., Vue.js, Vanilla JavaScript, JSP, MySQL, AWS), integrating new features and platform-level enhancements.
- Guided 2 teams in developing the Retail Internet Banking and Teller app, ensuring robust, user-centric solutions.
- Independently migrated a legacy General Ledger System from JavaScript, JSP, and MySQL to a service-oriented architecture, implementing custom concurrency and load-balancing mechanisms to support multi-tenancy and high-volume, real-time financial data posting.
- Supported the system in courses like Digital Banking Architecture at SMU, contributing to hands-on learning experiences. Customized applications with new features and platform integration to meet diverse client needs.

### GOVERNMENT TECHNOLOGY AGENCY

**May 2022 - Aug 2022**

#### *Punggol Digital District, Software Engineer Intern, Full-time Internship*

- Resolved the challenge of inconsistent sensor device ID formats by designing a mapping table to standardize device ID, updated primary keys in Microsoft SQL databases with Java, impacting 36+ million rows across 48 tables, reduced the development and maintenance time by 98%.
- Investigated RabbitMQ Certificate Revocation List mechanism failure, collaborated with open-source contributors, and implemented an account management solution to mitigate security risks.
- Automated user management in Red Hat Enterprise Linux with Shell Scripting, reduced manual effort by 5 hours per week.

### RAFFLES INSTITUTION BOARDING, RAFFLES INSTITUTION

**Oct 2021 – Current**

#### *Residential Assistant, Part-time Work*

- Accountable for managing the Raffles Boarding Program and overseeing the well-being of over 60 boarders in the block.
- Oversaw welfare initiatives as the overall in-charge at RI Boarding, managing planning, budgeting, procurement, and setup for student and staff birthday celebrations to foster bonding and create a cohesive “home away from home” environment.
- Received MOE Inter-Hostel Competition 2024 Heart Award for the years of dedication and excellence in service.

### SINGAPORE ARMED FORCES

**May 2019 – May 2021**

#### *Lieutenant, Platoon Commander, Motorised Transport Officer, Full-time National Service*

- Recipient of the Sword of Merit (awarded to the top 10% of the cohort).
- Led a platoon of 40+ Transport Operators in providing key logistical support for multi-unit training and operations, ensuring 100% mission success with 0 traffic accidents.
- Conducted battalion and company level training to foster and maintain servicemen's operation readiness.

## SKILLS

---

**Professional Certification:** [AWS Certified Solutions Architect - Associate](#), OutSystem Associate Reactive Developer O11, [Google Project Management Specialisation](#), [Oracle Java Certified Foundations Associate](#), [Google IT Support Specialisation](#)

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

**Softwares:** Git, Jira, Docker, Kubernetes, RabbitMQ, Microsoft Office, [Salesforce Superbadges](#)

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

## EDUCATION

---

### SINGAPORE MANAGEMENT UNIVERSITY (SMU)

*Bachelor of Science in Information Systems - Magna Cum Laude (cGPA: 3.68)*

**Aug 2018 – Dec 2023**

*Master of Science in Computing - Software & Cyber-Physical Systems Track (cGPA: 3.79)*

**Jan 2024 – Dec 2024**