

Lee Zhao Rui

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EDUCATION

National University of Singapore

Aug 2024 – Dec 2027

Bachelor of Computing in Computer Science

- Relevant coursework: Data Structures & Algorithms, Programming Methodology II, Software Engineering, Database Systems, Computer Organization, Introduction to Computer Networks, Introduction to Operating Systems, Introduction to AI & Machine Learning
- Activities & Societies: Member of NUS Fencing, Software Engineering Student Mentor, CS2100 Computer Organisation Teaching Assistant
- Awards: HDB Study Award, 2nd Runner-up NUS Fintech Summit 2026

Singapore Polytechnic

Apr 2019 – Mar 2022

Diploma with Merit in Mechatronics & Robotics

- Relevant coursework: Robotic Integration & Programming
- Awards: Assab Steels Merit Award 2022, SP Director's Honor Roll 2021 & 2022, SP Bronze Project Award 2022

SKILLS

Languages: Java, Python, C++, C, JavaScript, TypeScript, SQL, HTML/CSS, Google Apps Script

Frameworks & Databases: React Native, Expo, FastAPI, PostgreSQL, MongoDB, Supabase

Tools & Platforms: Git, Docker, Google Cloud, Vertex AI, Render, Sentry, PostHog, Infisical, Figma, Twilio

Other: OpenCV, ROS2, Gazebo, NumPy, PowerBI, Microsoft Excel

Spoken Languages: English, Mandarin (both fluent)

EXPERIENCE

Product Management Associate

August 2026 – Present

NUS Developer Group

- Translated NPO feedback and business goals into clear product requirements, partnering directly with design and engineering teams to build and deliver tangible features
- Managed the end-to-end development process—including setting timelines and resolving blockers—and drove continuous product improvements based on user feedback
- Championed the product's value proposition and maintained strategic alignment across executives, customers, and internal teams through regular progress updates

Software Engineer (Intern)

May 2026 – Present

Snowball

- Designed & shipped full-stack features to production on a React Native mobile app, including but not limited to mobile phone verification, liking of a comment, multi-photo log, a Strava API integration, an AI-powered automatic activity classifier & a canvas for users to collaborate and customize
- Led a full UI/UX overhaul of mobile application, redesigning key flows in Figma & implementing them end-to-end
- Analyzed PostHog product analytics to identify user behavior trends, directly informing feature prioritization & product roadmap and marketing decisions
- Monitored & triaged production errors via Sentry, diagnosing & resolving bugs to improve app stability & reliability

Deputy Operations Officer

May 2022 – May 2024

Singapore Armed Forces

- Supported the Operations Officer in coordinating daily Battalion-level operations for a unit of over 200 personnel
- Designed & built a Telegram bot using Google Apps Script to automate internal notifications & queries, reducing manual administrative workload

Assembly Technician

Mar 2022 – May 2022

VDL Enabling Technologies Group

- Assembled & tested precision components semiconductor wafer machines used in lithography manufacturing

PROJECTS & CONTRIBUTIONS

Maze Solver and Autonomous Agent

- Developed an AI agent to solve grid-based maze using A* search & heuristic path planning in Python
- Designed and trained a convolutional neural network (CNN) in PyTorch to navigate maze environments, applying state-space search, heuristic design, and deep learning techniques for autonomous decision-making

PathFinders (Orbital 2025)

- Built an AI-powered iOS/Android trip-planning app for Singapore tourism using React Native & Expo, with a Groq-backed recommendation engine
- Implemented backend services hosted on Render with MongoDB for data storage, & prototyped the UI in Figma
- Practiced Agile development with continuous integration & deployment (CI/CD) throughout the build

Mingle (NUS Fintech Summit 2026) [Attained 2nd Runner-up]

- Built a full-stack prototype of a dating app using XRPL blockchain smart escrows to reduce no-shows by introducing financial stakes

Vision-Aided Collaborative Robot Cell [Won Bronze Project Award]

- Led a team to design & develop a teaching kit, integrating Omron's GUI with ROS for wireless robot control