

# Lee De En

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**Computer Science student at the National University of Singapore** with a solid grounding in algorithms, data structures, and software engineering. Through diverse hands-on projects, I have developed practical skills in full-stack web development, machine learning, and cloud computing. I enjoy solving complex problems and building scalable, user-focused solutions. Passionate about using technology to drive real-world impact, I actively seek opportunities to grow through internships. I thrive in fast-paced, team-oriented environments and am excited to contribute to innovative projects that shape the future of technology.

## Experience

### Software Engineer Internship | PhillipCapital (Pte Ltd), Digital Innovation | Singapore

MAY 2025 – AUG 2025

During my Software Engineering Internship at Phillip Capital, I prototyped a blockchain-based remittance service built on the Layer 1 Rubix protocol, gaining practical exposure to decentralized systems. I worked extensively with backend technologies, using NestJS to develop microservices, PostgreSQL with ORM for database management, Redis for caching, and RabbitMQ for asynchronous task handling. I also containerized services with Docker to streamline deployment. This experience strengthened my skills in building scalable backend systems and deepened my understanding of blockchain integration in real-world financial applications.

## Education

### Bachelor of Computing in Computer Science | National University of Singapore

AUG 2023 – PRESENT

Software Engineering • Algorithms • Database Management • Computer Networking • Artificial intelligence • AWS Certified Cloud Practitioner

### Diploma in Aerospace Electronics, School of Electrical Electronic Engineering | Singapore Polytechnic

APR 2018 – APR 2021

Electrical Engineering • Embedded Systems (ESP32, C++) • Artificial intelligence • PCB Design & Circuit Analysis

## Technical Skills

### Technical Skills

- **Languages:** Java • JavaScript • TypeScript • Python • SQL • HTML/CSS
- **Frameworks & Libraries:** Node.js • Express.js • Spring Boot • React • Flask
- **Databases:** PostgreSQL • MongoDB • Redis
- **DevOps & Cloud:** AWS (EC2, S3) • Docker • Git • GitHub Actions
- **Messaging & Queueing:** RabbitMQ

## Activities

### Lion Befrienders @ Mei Ling Street

Volunteer Befriender | AUG 2024 – PRESENT

- Provided regular companionship and emotional support to elderly residents, building meaningful relationships through weekly visits and activities.
- Assisted with basic needs, social engagement, and promoting mental well-being among socially isolated seniors.
- Developed empathy, active listening, and communication skills in a community outreach setting.

# Projects

## Expense Tracker

MAY 2024 – AUG 2024

- Developed a full-stack web application using **MongoDB, Express, React.js, and Node.js (MERN stack)** to provide a responsive and user-friendly expense tracking solution.
- Implemented real-time transaction management features including adding, editing, and deleting expenses, with automatic recalculation of totals to ensure accurate financial insights.
- Focused on seamless user experience through dynamic UI updates and efficient backend data handling.

## Tic-Tac-Toe Game

DEC 2023 – MAR 2025

- Developed an interactive Tic-Tac-Toe game using modern **JavaScript**, featuring both multiplayer mode and an AI opponent powered by the **minimax algorithm**.
- Implemented dynamic game setup, real-time gameplay interactions, and responsive, mobile-friendly design to enhance user experience.
- Demonstrated algorithmic problem solving and front-end development skills through game logic and UI implementation.