

EDUCATION

Nanyang Technological University (NTU)

Aug 2021 - Jun 2024

- **Bachelor of Engineering (Electrical and Electronic Engineering)**
- Specialisation: **Info-Communications Engineering (Computer Engineering)**
- Relevant Modules: (1) From Computational Thinking to Programming (2) Data Structures & Algorithms (3) Introduction to Data Science & Artificial Intelligence (4) Web Application Design (5) Artificial Intelligence & Data Mining (6) Software Engineering (7) Database Systems (8) Computer Communications (9) Machine Learning Design & Application (10) Microprocessors (11) Digital Signal Processing

Online Certification (Coursera)

- Web Design for Everybody: Basics of Web Development & Coding Specialisation (2024)
- PostgreSQL for Everybody Specialisation (2023)
- Python Basics (2022)

Ngee Ann Polytechnic (NP)

Apr 2016 - May 2019

- **Diploma in Electrical Engineering**
- Relevant Modules: (1) Programming in C

ACADEMIC / MODULE / PERSONAL PROJECTS

NTU Final Year Project: **Database Management Web Application**

Aug 2023 – Jun 2024

- Apply **JavaScript** (SvelteKit) to create a dynamic dashboard for real-time data visualisation and Excel integration.
- Apply Chart.js for advanced data visualisation, translating raw data into actionable insights.
- Establish a robust backend with Prisma and Node.js for efficient data management and API functionality.
- Craft responsive, user-friendly interfaces, enhancing overall user experiences, and garnering positive feedback.
- Deploy Node.js application with PM2, ensuring stability and optimal performance.

NTU Design & Innovation Project: **ML for Smart Grid Data Analytics**

Jan 2023 – May 2023

- Developed a responsive web application using **JavaScript** (SvelteKit) and **Python** (Flask) to analyse and visualise appliance power consumption data.
- Implemented a user-friendly interface for uploading CSV files and selecting specific appliances, enhancing user interaction.
- Utilised Chart.js for dynamic line charts, offering real-time insights into power consumption patterns.
- Designed Flask endpoints, integrating Hidden Markov Models for appliance data pattern recognition.
- Integrated a robust Flask and Node.js backend for seamless data processing and API functionality.

SAF Project: **Reporting Sick Telegram Bot**

Apr 2021 - Aug 2021

- Created and deployed bot to streamline process from personnel to duty officer, reducing repetitive work of crafting messages by 90% utilising **JavaScript**.
- Implemented bot for battalion usage.

NP Final Year Project: **Web-based Video Conferencing - Telehealth Focused**

Oct 2018 - Feb 2019

- Designed and developed a web application enabling peer-to-peer video conferencing using **HTML**, **CSS**, and **JavaScript**.
- Integrated WebRTC for real-time audio and video communication.
- Configured a CI/CD pipeline using Travis CI to automate Node.js deployment in AWS Elastic Beanstalk reducing repetitive development processes by 20%.
- Achieved **Distinction** Grade.

INTERNSHIP EXPERIENCE

Infinion Technologies Asia Pacific Pte Ltd

Digitalisation / Automation Project Engineer

May - Dec 2022

- Contributed to the development of inventory database web application, including potential future expansion.
- Boosted productivity by digitalising internal processes using **Python (Flask)**, **MySQL**, and RedHat OpenShift.
- Used Flask-Login to provide Role-Based Access Control (RBAC) for secure access management.
- Led the full project lifecycle utilising project management software, KLUSA, delivering the project one month ahead of schedule.
- Refined the project code structure for improved readability and scalability with the use of Flask Blueprints.
- Raised awareness of the project by creating informative posters, publications, and presentations for internal use.

Centre for Strategic Infocomm Technologies (CSIT)

Cybersecurity Software Researcher

Mar - Apr 2019

- Utilised 3 software programming (**HTML**, **CSS**, **JavaScript**) to design and develop in-house software.

SKILLS

- **Languages:** Fluent in English and Conversational Proficiency in Chinese (Mandarin)
- **Programming Languages:** Python, JavaScript, C Language
- **Web Development:** Flask, Node.js, Svelte, Chart.js, Tailwind CSS, Bootstrap, Bulma
- **Version Control & Databases:** Git, MySQL, PostgreSQL, Prisma
- **Development Tools & Utilities:** TypeScript, Prettier, date-fns, Moment.js, SheetJS
- **Software Applications:** Apple iWork, Microsoft Office 2023, Figma, Sketch

AWARDS / ACHIEVEMENTS / RECOGNITION

- Terasaki Electric Silver Medalist (2019)
- Edusave Merit Bursary (2017 - 2018)
- Top in 7 Modules Accomplishment in NP: (1) Computing Programming (2) Computer Aided Drawing (3) Innovation Toolkit 1 (4) Innovation Toolkit 2 (5) Engineering Mathematics 1 (6) Engineering Mathematics 3A (7) Advanced PLC & Networking (2016 - 2018)

CO-CURRICULAR ACTIVITIES & COMMUNITY SERVICES

NTU Floorball Club, Member

Aug 2021 - **Present**

Youth Expedition Programme, Volunteer

Sep 2017

- Contributed to engaging and teaching underprivileged children in Baray District, Cambodia.
- Involved in social activities (e.g., school housekeeping and repainting).
- Collated donated clothes and stationery to distribute to two orphanages.