

Education

Carnegie Mellon University

Pittsburgh, PA

Master of Science in Machine Learning

Dec 2024

- **Relevant coursework:** 10-617 Intermediate Deep Learning, 10-715 Advanced Introduction to Machine Learning, 10-725 Convex Optimization, 36-705 Intermediate Statistics

National University of Singapore

Singapore

Bachelor of Computing in Computer Science with Honours

Aug 2023

- **GPA:** 4.88/5.00 (3.92/4.00)
- **Dean's list:** AY2021/2022 Semester 1 and AY2020/2021 Semester 1
- **Top student for 3 modules:** CS4243 Computer Vision and Pattern Recognition among 156 students, CS2103T Software Engineering among 338 students, and CS2106 Introduction to Operating Systems among 403 students
- **Teaching assistant:** CS2109S Introduction to AI and Machine Learning, CS2040S Data Structures and Algorithms, CS2103T Software Engineering, CS2106 Introduction to Operating Systems, CS2030 Programming Methodology II, CS3241 Computer Graphics
- Nominated for teaching awards by 9 students
- **Student exchange programme:** The University of British Columbia, Spring semester 2022

Work Experience

Defence Science and Technology Agency

Singapore

Software Engineer Intern

Jan 2023 - Jun 2023

- Optimized a drone tracking software written in C++ by rewriting and parallelising parts of the code base with the help of profiling tools, speeding it up by 50%
- Extended a large open-source drone control software, QGroundControl, to link with existing company software and to achieve custom fine-grained control over the company's drones, ultimately realizing a production-ready solution

Samsung SDS

Seoul, South Korea

Machine Learning Intern

Jun 2022 - Aug 2022

- Developed containerized desktop and web based visualization software using Kivy and Vue.js respectively
- Integrated various image and voice Deepfake detection models into the software, visualizing their gradient-weighted class activation mapping, enhancing the explainability of the team's artificial intelligence products

Defence Science and Technology Agency

Singapore

Machine Learning Intern

May 2021 - Jul 2021

- Thoroughly tested several state-of-the-art Automatic Speech Recognition (ASR) PyTorch models to verify their suitability for deployment
- Implemented a containerized end-to-end ASR pipeline with detailed documentation, allowing users to easily utilize the pipeline for their needs
- Deployed the completed pipeline to distributed systems using ClearML, enabling fast distributed training on large internal datasets

Honors & Awards

2022 **1st Place**, Meta Global Hackathon, 3255 participants

Virtual

2021 **1st Place**, Citi HackOverflow

Singapore

2020 **2nd Place**, BrainHack Today I Learned

Singapore

Projects

RouteMaker [\[link\]](#)

Front-end Developer

Apr 2021 - Sep 2021

- Developed the front-end for RouteMaker, a cross-platform application that utilizes machine learning to allow users to quickly create climbing routes and share them with the community
- The front-end was written using TypeScript, SCSS, and Vue.js under the Ionic framework

EzEDS [\[link\]](#)

Arduino Developer

Dec 2019 - Feb 2020

- Built a public transport card top-up machine to equip learners at the Down Syndrome Association (Singapore) with independent living skills
- Received sponsorship offers from 3 social service agencies to support the machine's further development

Skills

Programming Languages

Python, Java, C/C++, Javascript/Typescript

Frameworks

JavaFX, React, Vue.js, Ionic, Kivy, JQuery, HTML5, CSS3/SCSS

Machine Learning

PyTorch, TensorFlow, Keras, Scikit-Learn, OpenCV

Tools

NumPy, Pandas, PostgreSQL, Docker, Git, Regex