

## WORK EXPERIENCE

## DBS Bank

Analyst, Software Engineer

- *Backend Engineer*
  - Developed APIs for core banking team

Jul 2024 - Present

Singapore

## Singapore Airlines Engineering Company

Digital &amp; Continuous Improvement Executive

- *Digital Transformation | Project Management | Agile Methodology*
  - Product Owner (PO) for digital projects, achieving cost reductions & significant man-hour savings using Agile methodology
  - Led Business Process & Operations Value Stream Mapping (BPVSM/VSM) initiatives, identifying operational inefficiencies & driving the implementation of targeted improvement strategies; Improved end-to-end business & workbench processes using tools like Python, PowerAutomate, & Tableau, saving more than 10 hours weekly
- *Crisis Mitigation & Management Core Team*
  - Played a pivotal role in crisis management, leading revisions in Standard Operating Procedures (SOPs) to mitigate risk; Introduced automations to reduce human error, saving 14 hours weekly, enhancing productivity & efficiency
  - Facilitated stakeholder collaboration & initiated daily reports for upper management decision-making on operational continuity

Jun 2023 - Jun 2024

Singapore

## Wearables &amp; Machine Learning Research

Research Assistant

- Employed machine learning models (CNN, RNN, LSTM) to optimize fencing movement prediction, achieving 85.5% accuracy

Mar 2023 - Dec 2023

Singapore

## Sweden Foodtech

Technical Consultant

- *Website Management | User Experience (UX)*
  - Revamped and maintained event & company websites improving UX; collaborated with technical providers to minimize downtime
- *Digital Transformation*
  - Created a single source of truth for data management & automated data pipeline, reducing manual work & improving data accuracy

Aug 2021 - Jun 2022

Sweden

## Smart Nations &amp; Digital Government Office

Intern, Government Data Office

- *Data Management | User Experience*
  - Revamped internal Data Management Portal, enhancing user experience for the Government's data community, across agencies
- *Policy Development | Data Analysis*
  - Contributed to the development of policies for secure data usage & exchange across Government agencies & commercial partners
  - Conducted detailed data analysis for COVID-19 operations, providing insights for informed response & decision-making

Oct 2020 - Dec 2020

Singapore

## EDUCATION

## National University of Singapore (NUS)

B.Eng Computer Engineering with Honours (Distinction) | Internet of Things Specialization | USP

- University's Scholars Programme (USP): Selected among the top 3% of the cohort for a rigorous multidisciplinary programme
- Academic Achievement: Top Student in CS3237 Introduction to Internet of Things
- Teaching Assistant (AY2022/23): Software Engineering & Object Oriented Programming [OOP] & Lean Startup: Market Validation
- Research Assistant: Undergraduate Research Opportunities Programme (AY2020/21)
  - Applied time series analysis to validate demand & supply forecasting models, optimizing dynamic resource planning
- Winter Exchange Programme 2019: Hanyang University (Korea)

Aug 2019 - May 2023

## Kungliga Tekniska Högskolan (KTH) Royal Institute of Technology

NUS Overseas Colleges (Stockholm, Sweden)

- A rigorous entrepreneurship program combining a full-time internship at a startup while taking entrepreneurship modules

Aug 2021 - Jun 2022

## CERTIFICATIONS & CREDENTIALS

### Technical Certifications

- [Machine Learning Specialization - 2023](#)
- [Android Certified Application Developer - 2019](#)

### User Experience (UX) & User Interface (UI)

- [User Experience Research & User Interface Design - 2021](#)

### Project Management & Agile Methodologies

- [Professional Scrum Product Owner I \(PSPO I\) - 2024](#)
- [Agile Kanban - 2022](#)
- [Lean White Belt \(Six Sigma\) - 2023](#)

### Digital Marketing

- [Search Engine Optimization Strategies - 2022](#)

## TECHNICAL SKILLS

### Programming Languages

- Java
- Python (Flask, Pandas, Tensorflow)
- C/C++
- Assembly Language
- Verilog

### Web Development / UI Design

- HTML
- CSS
- Javascript
- Figma / Adobe XD
- WordPress

### Tools & Framework

- Agile (Scrum, Kanban)
- Git
- Tableau
- PowerAutomate
- FPGA & Hardware Development

## SELECTED PROJECTS (BUILT WITH)

### Beyond Vision (Smart Walking Cane) (C, Python [Pandas, TensorFlow, Flask], MQTT)

- Designed & prototyped a smart walking cane capable of detecting falls with 97.88% accuracy, & identifying fires & obstacles with real-time location relays & notifications via Telegram messaging. Data was visualized on a web application to aid analysis, & predict likely fall locations of individuals & frequent fall zones for urban planners.

Aug 2022 - Nov 2022

[GitHub Repo](#)

[Technical Deck](#)

[Demo Video](#)

### Laser Tag++ (C, Python [Pandas])

- Led the hardware design & coding of an [AR laser tag game with gesture detection \(2-players\)](#), filtering noisy sensor data & achieving a 96.14% accuracy rate. Managed the project within a \$250 budget.

Aug 2022 - Nov 2022

[Gameplay Video](#)

[GitHub Repo](#)

### Carpark Density Prediction & Data Visualization (Python [Pandas])

- Employed a machine learning algorithm to dynamically predict hourly carpark availability, aiding users in finding optimal parking lots & assisting stakeholders for urban planning by visualizing carpark distances & crowd density.

Sep 2022 - Nov 2022

[GitHub Repo](#)

[Technical Deck](#)

### NotUS (Java)

- Developed a Command Line Interface (CLI) based note-taking & scheduling application, allowing users to categorize notes with tags & pins. The app also highlights potential event clashes. Developed through a complete software development life-cycle from user stories to Junit test cases.

Aug 2020 - Nov 2020

[GitHub Repo](#)

### Knewbie (Python [Flask] HTML, CSS, JavaScript)

- Built a web application that provides tailored educational content using machine learning. The project was one of six selected to be featured on [School of Computing's social media channels](#). Comprehensive documentation including cognitive walkthrough, user testing feedback & developer guides were recorded.

May 2020 - Aug 2020

[GitHub Repo](#)

## ADDITIONAL ACHIEVEMENTS & ACTIVITIES

### Jane Street ETC Last Hour Challenge (1<sup>st</sup> Place)

- Developed an automated trading strategy on a virtually hosted stock exchange, securing first place for the last hour challenge

2020

### English Language Teacher (South Korea)

- Taught English as a second language to 11-year olds, focusing on improving conversational fluency & language proficiency

2019

### Asia-Pacific Region Youth Forum (Philippines) Delegate

- A regional forum on leadership & sustainable development, contributing to policy recommendations & youth-led initiatives

2018

## LANGUAGES SPOKEN

English (Native)

American/British Sign Language (Fluent)

Tamil (Fluent)