# EDUCATION

National University of Singapore **Aug 2019 - July 2023**

Bachelor of Engineering (CEG)

* Bachelor of Engineering in Computer Engineering, Honours, IoT specialization
* Minor in Business Analytics,
* Expected Date of Graduation: July 2023
* Current CAP Score: 4.58 / 5.00

Relevant coursework/modules taken

* Engineering principles and practice 1 & 2, Discrete Structures, Data structures and algorithms, Digital Design, Software Engineering and Object-Oriented Programming, Real-Time Operating Systems, Intro to Business Analytics

# WORK AND INTERNSHIP EXPERIENCESS

# Teaching Assistant for CG1111 module, NUS Aug 2020 - Nov 2020

* Facilitated lab sessions both in-person and online, guiding students who need assistance
* Graded lab reports and marked lab journals, proctored for exams
* Monitored students' progress in their learning journals to ensure that they are keeping up with the lessons

# Ace-Learning, Part time Apr 2019 - May 2019

* Conducted instructional class to teach primary and secondary school students to use the Ace-Learning application
* Collaborated with other part timers to craft and add practice questions to the Ace-Learning portal

### ACADEMIC PROJECTS

**Autonomous maze navigation robot, Team project****Aug 2019 - Nov 2019**

* Developed and implemented sound frequency detector component of the robot
* Calibrated colour detection, motor system, infrared sensors, and ultrasonic sensors

**Sound-based Entertainment System, Pair project****Jan 2020 - Apr 2020**

* Created mechanics for the interactive games and art program
* Implemented the system to process and render each of the 4 distinct applications
* Designed the UI for the digital art application and implemented functionality

**CLI-based Task Manager Application, Individual project Aug 2020 – Oct 2020**

* Developed the user interface and data management system for the task manager app in Java, using object-oriented programming concepts
* Published the application to personal GitHub repository, publicly available
* Wrote a comprehensive user guide on the linked GitHub pages site

**CLI-based Writing Assistant Application, Team project Sep 2020 – Nov 2020**

* Developed the idea storage and filtering features of the application
* Set-up team and team repository, as well as project boards to consolidate user stories
* Collaborated with teammates following agile project management method setting up weekly goals and reviewing progress regularly
* Contributed several UML diagrams and wrote several sections of the developer guide

**Remote control ARM-based robot, Team project Aug 2020 – Nov 2020**

* Developed the user interface for the remote application
* Designed the RTOS based logic for the various subsystems of the robot, including the lighting, sound system, motor control and Bluetooth communication with the app
* Configured the hardware, including soldering for the FRDM-KL25Z board and pin layout

[**DeskTranslate**](https://devpost.com/software/desktranslate)**, Real-Time OCR Desktop Translator, Team Project Jan 2021 – Jan 2021**

* Won Most Socially Useful Hack for Hack & Roll 2021
* Integrated several python libraries to detect, translate and narrate text on screen in real time to assist those who may have learning difficulties or visual impairments
* Designed the UI using PyQt5 to be customizable to improve accessibility of the app

**CO-CURRICULAR ACTIVITIES**

**Vice Project Director, COMaraderie 2021 Oct 2020 – Jan 2021**

* Organised the event by NUS Computing Club Student Life Cell with a turnout of 200 people
* Oversaw the preparation of the event, especially for Logistics and Finance
* Designed original lanyards and stickers for the event

**ADDITIONAL INFORMATION**

**Languages:**

* English – Native / Bilingual Proficiency
* Chinese – Working Proficiency

**IT Skills:**

* Coding experience in C, C++, Java, Python, R, Ruby, HTML, CSS, JavaScript, and Kotlin from various modules and projects and using the Verilog HDL in Vivado
* App development in Android studio from DSTA CODE\_EXP hackathon (May 2020)
* Basics of cyber security from DSTA CDDC competition (June 2020), GovTech Stack the Flags event (Dec 2020)
* Basics of Data processing and data science from Shopee code league and LifeHack 2020 Datathon (June-Aug 2020)
* Web development using Ruby on Rails with REACT Frontend
* 3D modelling in Fusion 360 from a workshop by the NUS ECE club (2019)
* UX/UI design, specifically creating up to mid-fidelity prototypes using Figma from the Shopee Product and Design competition (Dec 2020)
* Creating a business model and evaluating profitability from the Income-X Business case challenge competition (Dec 2020)
* Microsoft Office, Excel and PowerPoint, Git

**Interests:**

* Creating digital art using Krita and traditional art in various mediums
* Video editing using Davinci Resolve