

TAN WEI QIANG BENJAMIN

+65 8145 6842 | benjamin.tan@outlook.sg | <https://www.linkedin.com/in/tanweiqiang/> | <https://btwq97.github.io/>

EDUCATION & QUALIFICATION

Bachelor of Engineering (Electrical Engineering), National University of Singapore (NUS) **AUG 2018 – PRESENT**
• Specialization: **Internet of Things**; Industrial Tracks: 5G and Next Gen Networks and Advanced Electronics.

INTERNSHIP EXPERIENCE

Sustainable Living Lab, Singapore

AI for Citizen Program Instructor

FEB 2022

- Taught Secondary school students to program an AlphaMini robot using the “Alpha Mini” mobile application.

AI for Youth Program Instructor

AUG 2021 – JAN 2022

- An enrichment program for Secondary and Junior College students to promote youth’s interests in Artificial Intelligence.

Hydroleap Private Limited, Singapore

Internet of Things Engineer Internship

MAY 2021 – JUL 2021

- Developed an in-house Python script to act as a Gateway to stream data from edge sensors to the cloud over ModbusTCP.
- Maintained a time-series database using AWS Timestream Cloud.
- Visualisation of time series data and alerts page over a dashboard created using AWS QuickSight and Grafana.

Raffles Learning Lab, Singapore

Frontend Development Instructor

JAN 2021 – MAY 2021

- Taught students basic frontend frameworks such as:
 - HyperText Multimedia Language (HTML) and Cascading Style Sheet (CSS).
 - Public hosting of personal website on Github Pages.
 - Creating of website using Graphical User Interface (GUI) such as Google Sites.
- Created easy-to-digest notes and provided timely feedbacks on students’ works to facilitate learning.

Game Design Instructor

JUL 2020 – DEC 2020

- Taught students basic design frameworks such as:
 - Rendering of graphics, audio modules, in-game text, etc using Simple and Fast Multimedia (SFML) library.
 - Basic Object-Oriented Programming (OOP) concepts to store in-game information such as game states.
- Created easy-to-digest notes and provided timely feedbacks on students’ works to facilitate learning.

Resync Technologies Private Limited, Singapore

Internet of Things Engineer Internship

MAY 2020 – DEC 2020

- Added the following functionalities into company’s existing firmware:
 - Symmetrical key cryptography using the AES 128 standard to securely transfer data from edge device to the cloud.
 - Added cloud to device control methodology using MQTT and JSON API.
- Wrote Python script to automate email subscription service to alert clients of any anomaly in the data points collected.
- Testing and installation of smart sockets and smart energy meters on-site.

FINAL YEAR PROJECT

EE4002D Design Capstone

AUG 2021 – APR 2022

- Project Title: OnSight – Navigational Aids for the Visually Impaired (VIs).
- Objective: With as little human assistance as possible, OnSight aims to navigate the VIs from the entrance to the stalls.
- Findings: We found out that mobile phone plays an important role in helping the VI in their day to day activity. We thought it would be good if we could integrate indoor navigation into their mobile devices as well.
- Proposed Solution: We proposed to use Bluetooth Low Energy to perform Trilateration for indoor localisation and an in-built magnetometer to estimate VI’s orientation. A suggested direction will be generated and passed onto the VI using haptic feedbacks.
- Tech Stack: Flutter and DynamoDB

LEADERSHIP EXPERIENCE

AIESEC in NUS, Singapore

Team Leader (Marketing), Global Information Session 2019

SEP 2019

- Planned and executed marketing strategies to promote AIESEC Volunteering Projects to the NUS student body.

Team Leader (Logistics, Finance and Admin Matters), August Recruitment Organising Committee 2019

JUN 2019 – AUG 2019

- Negotiated with external companies for product and cash sponsorships.

Engin’ Club, Singapore

Head of Programs (Games, Academics and Finale), Engin’ O’Week 2019

MAY 2019 – JUL 2019

- Oversaw 3 sub-groups and executed a freshmen orientation camp with over 900 participants.

Electrical and Computing Engineering (ECE) Club, Singapore

Organising Committee, Impetus Camp 2019

MAY 2019 – JUL 2019

- Assisted with the execution of the games and logistical matters during orientation camp.

RELEVANT CERTIFICATIONS / AWARDS

EE4002D FYP Poster Design 2022

APR 2022

Result: 3rd Place Credentials: https://btwq97.github.io/assets/certs/poster_design.pdf

Database Management Essentials

JUN 2021

Credentials: <https://www.coursera.org/account/accomplishments/certificate/8EWQUZVEMKB2>

Google Cloud Platform Big Data and Machine Learning Fundamentals

JAN 2021

Credentials: <https://www.coursera.org/account/accomplishments/certificate/P6N5YW2MTQH9>

NUS iDP Ideathon -- Ideate 2020 | Team: CAMmunication

AUG 2020

Result: 1st Place (out of 85 participants) Credentials: <https://ideate2020.devpost.com/project-gallery>