TAN WEI QIANG BENJAMIN

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EDUCATION & QUALIFICATION

Bachelor of Engineering (Electrical Engineering), National University of Singapore (NUS)	**AUG 2018 – JUN 2022**

- Grade: **Honours (Distinction);** Specialisation: **Internet of Things**

WORK EXPERIENCE

Government Technology Agency (GovTech), Singapore

Associate Systems Engineer **JUN 2022 - PRESENT**

- Integrate different sub-systems together under the deployment team.

INTERNSHIP EXPERIENCE

Sustainable Living Lab, Singapore

AI for Citizen Program Trainer **FEB 2022**

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

AI for Youth Program Trainer **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 a personal website on Github Pages.
  - Creating a website using Graphical User Interface (GUI) such as Google Sites.
- Created easy-to-digest notes and provided timely feedback 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 feedback on students' works to facilitate learning.

Resync Technologies Private Limited, Singapore

Internet of Things Engineer Internship **MAY 2020 – DEC 2020**

- Added the following functionalities to the company's existing firmware:
  - Symmetrical key cryptography using the AES 128 standard to securely transfer data from edge devices 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 in an indoor environment.
- Finding: Mobile phone plays an important role in helping the VI in their day-to-day activity. We want to incoporate indoor navigation into their mobile devices for a seamless experience.
- Proposed Solution: We used Bluetooth Low Energy to for indoor localisation (trilateration) and an in-built magnetometer to estimate VI's orientation. A suggested direction will be generated and passed onto the VI using haptic feedback.
- 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.

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