

TAN WEI QIANG BENJAMIN

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EDUCATION & QUALIFICATION

Bachelor of Engineering (Electrical Engineering), National University of Singapore (NUS)	AUG 2018 – PRESENT
<ul style="list-style-type: none">• Specialisation: Internet of Things.• Industrial Tracks: 5G and Next Gen Networks and Advanced Electronics.	

JOB EXPERIENCE

Internet of Things Engineer Internship	MAY 2021 – JUL 2021
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- Created an in-house application to replace popular modbus testing tool (Modpoll) for data collection and testing using Python.
- Created data pipeline to store raw data in AWS Timestream cloud.
- Visualisation of data using AWS Quicksight and AWS Managed Grafana.
- Miscellaneous: documentations for proper handover, procurement of hardware products from Chinese manufacturers and data entry.

Coding Tutor Freelance	JUL 2020 – MAY 2021
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- Delivered clear and easy-to-digest contents to students from age 7-15 with weekly notes.
- Course 1: Indie Game Design:
 - Used open-source library (SFML) for the rendering of window, graphics, and audio modules.
 - Created classical games such as Tetris and Race Car.
- Course 2: Basic Frontend Development:
 - Used HTML and CSS to design and build websites using open-source templates.
 - Created sub-domains using Github to make website public.
 - Used modern web design tool such as Google Sites to create websites using GUI method.

Internet of Things Engineer Internship	MAY 2020 – DEC 2020
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- Revised and updated company's firmware applications in Linux Operating System (OS).
- Improved cloud to device control methodology from using SSH to MQTT JSON API.
 - Added cryptography functionality (AES 128) using openssl for secure JSON string transfer.
- Wrote a Python script to automate email subscription services.
- Hardware testing of smart sockets:
 - Data collection using MQTT, storing of data locally using sqlite3 and visualisation of data using matplotlib.
- Miscellaneous: procurement of hardware products from Chinese manufacturers.

RELEVANT COURSEWORKS

CS2040C Data Structures and Algorithms	AY20/21 S2
<ul style="list-style-type: none">• Learning fundamental data structures and algorithms concepts.	
EE2028 Microcontroller Programming and Interfacing	AY19/20 S1
<ul style="list-style-type: none">• Programmed LPC 1769 ARM Cortex M3 Baseboard using NXP LPCXpresso (C programming and ARM Assembly language).	
CS1010E Programming Methodology	AY19/20 S1
<ul style="list-style-type: none">• Learnt fundamental programming concepts in Python.	
EE2026 Digital Design	AY18/19 S2
<ul style="list-style-type: none">• Programmed Digilent Basys 3 FPGA Baseboard using Xilinx Verilog (C programming).	

LEADERSHIP EXPERIENCE

AIESEC in NUS Global Information Session 2019 Team Leader (Marketing)	SEP 2019
<ul style="list-style-type: none">• Planned and executed marketing strategies to promote AIESEC Volunteering Projects to the NUS student body.	
AIESEC in NUS August Recruitment OC 2019 Team Leader (Logistics, Finance and Admin Matters)	JUN 2019 – AUG 2019
<ul style="list-style-type: none">• Negotiated with external companies for product and cash sponsorships.	
Engin' Club Engin' O'Week 2019 Head of Programs (Games, Academics and Finale)	MAY 2019 – JUL 2019
<ul style="list-style-type: none">• Oversaw 3 sub-groups and executed a freshmen orientation camp with over 900 participants.	
Electrical and Computing Engineering (ECE) Club Impetus Camp 2019 Organising Committee	MAY 2019 – JUL 2019
<ul style="list-style-type: none">• Assisted with the execution of the games and logistical matters during orientation camp.	

RELEVANT CERTIFICATIONS / AWARDS

Database Management Essentials	JUN 2021
<ul style="list-style-type: none">▪ Credentials: https://www.coursera.org/account/accomplishments/certificate/8EWQUZVEMKB2	
Google Cloud Platform Big Data and Machine Learning Fundamentals	JAN 2021
<ul style="list-style-type: none">▪ Credentials: https://www.coursera.org/account/accomplishments/certificate/P6N5YW2MTQH9	
NUS iDP Ideathon -- Ideate 2020 Team: CAMmunication	AUG 2020
<ul style="list-style-type: none">• Topic: Innovate ways to improve remote collaboration (link: https://ideate2020.devpost.com/).• Solution: A software application that uses computer's camera to scan and predict emotions through Artificial Intelligence and Machine Learning Algorithms.• Result: 1st Place (out of 85 participants) Credentials: https://ideate2020.devpost.com/project-gallery	

RELEVANT SKILLS

- Hard skills:
 - Linux OS and command line interface.
 - C / C++ (for embedded systems and scripting).
 - Python (for scripting).
- Proficient in English and Chinese (simplified) languages.
- Comfortable with the use of collaboration tools such as Gitlab, Google Drive, Slack and Jira.