

## EDUCATION

### Monash University

Selangor, Malaysia

- **Major:** BSc Hons. in Electrical and Computer Systems Engineering Graduation Date: July 2024
- **Coursework:** Electrical Energy Systems, Power Systems Fault Analysis, Smart Grids, Control Systems, Embedded system, IoT, Computer Architecture, Circuits, Logic Design, Signal Processing, Analogue Electronics.

## EMPLOYMENT

### Selangor Human Resource Development Centre (SHRDC)

Shah Alam, Malaysia

Electrical Engineering Intern

November 2022 – February 2023

- Integrated technologies such as LiDAR sensors and PLCs to optimize industrial operations.
- Implemented advanced solutions utilizing Siemens computer systems and specialized sensors to enhance industrial performance.
- Used MQTT to facilitate communication between machines, improving workflow.
- Implemented SCUTTLE AGV robots like to present data clearly, aiding decision-making processes using ROS.
- Developed automated Node-RED programs and enabled machine control via WhatsApp, streamlining tasks and enhancing efficiency.

### Monash Warwick Alliance

Selangor, Malaysia

Research Intern

June 2023 – July 2023

- At Deloitte Risk Advisory, I undertook a project aimed at enhancing model risk management for the financial services industry, specifically focusing on the development of credit risk and climate risk models utilizing industry and client-specific data.
- This initiative aimed to improve the stability and reliability of financial institutions' risk management practices, ultimately contributing to more resilient and sustainable financial systems for society.

## PROJECT EXPERIENCE

**Personal Website:** [www.treshan.me](http://www.treshan.me) (for additional information and projects)

**Holistic Approach for Electric Power Cable Sizing** (Research Project), which includes corporate concerns of ESG, return on investment, cable lifespan while providing insights into its preventive maintenance aspects. All these have been the focus point of the financial stakeholders. The Project was done in collaboration with a leading Cable Manufacturer based in Malaysia.

**MONASH MALAYSIA COLOR-BOWL 2023**, designed and implemented PID speed control for an autonomous robot by constructing the whole circuit to measure speed using encoders and PWM motors controller circuits to control speed using C. Added autonomous driving by using ultrasound and IR sensors and implemented PID steering control. The design and construction of an autonomous robot for a competition, from SOLIDWORKS to 3D printing

**Advanced Longitudinal Dynamics and Cruise Controls System Design**, developed a mathematical framework for a cruise control system aimed at consistently maintaining vehicle speed across diverse conditions. Engineered controller's adept at managing both speed and incline alterations with exceptional accuracy and minimal deviation. Enhanced the system through repeated experimentation, fine-tuning PID controller configurations to ensure stability and swift responsiveness.

## SKILLS & INTERESTS

**Skills:** PSSE & Power Factory, ESG (Environmental, Social, and Governance), MATLAB, C/C++/JS, Dart (App Dev), ReactJS VHDL, MS Office (Word, Excel & PowerPoint), PLC, LTSPICE Simulations, SOLIDWORKS, AUTOCAD, COMSOL Simulations, Effective Documentation, Effective Communication, ROS, Problem solving, Energy Auditing.

**Interests:** ESG (Environmental, Social, and Governance), Sustainability, Renewable Energy, Power Electronics, Problem Solving, Leadership.

## REFEREES

Available upon request.