

# YAN CHENG POON

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## EDUCATION

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### University of Michigan, Ann Arbor

May. 2025

*Bachelor of Science in Engineering - Computer Engineering, CGPA: 3.86*

- Relevant Courses: Logic Design (Verilog), Data Structure & Algorithms, Circuits Analysis, Intro to VLSI, Integrated Circuits
- Focused and Specialized Field: Embedded Systems, Microsystems, Digital System & Logic Design, Chip Design

### Taylor's University, Malaysia

May. 2023

*American Degree Transfer Program (Engineering), GPA: 3.84, Best Engineering Student Honor*

## WORK EXPERIENCE

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### University of Michigan Solar Car Team, Ann Arbor

Aug. 2023 – Present

*Microsystems and Firmware Engineer*

- Designed the schematics and layout for a PCB that controls the car's headlights, stop lights, and turn signals with Altium.
- Led in redesigning the dashboard PCB to integrate Battery Management System (BMS) controls to the dashboard.
- Assisted in the software and hardware integration of the car's sensors with the GPIO pins of the main MCU.
- Analyzed and rewrote the firmware code for the car's light and brake system to increase the response time by ~120%
- Developed an RTOS-based firmware that handles interrupts and schedules tasks for the MCU based on specific priorities.

### Aerodyne Group, Malaysia

Jan. 2023 – Mar. 2023

*Tech Research Intern*

- Contributed to securing a \$5 million Unmanned Aircraft System (UAS) application development project.
- Worked with the project team on the prototype and pseudocode design of a UAS Traffic Management application.
- Assisted in designing the schematics and layout for a GPS and metrics tracker PCB to enable remote metrics tracking.
- Assisted in implementing infra-red, LiDAR sensors to drones by using Arduino and Embedded C programming.
- Performed research & analysis into emerging drone and chip technologies to fit clients' needs.

### Taylor's University, Malaysia

Jan. 2022 – Dec. 2022

*Calculus 1 and Physics 1 Instructional Aide*

- Hosted tutoring sessions, discussion sessions, and office hours for 150+ students enrolled in Calculus 1 and Physics 1.
- Assisted professors in planning course contents/schedules, designing homework, and grading students' works.
- Implemented tailored academic support strategies resulting in the transformation of 8 students from initial 'Fail' grade to 'A'.

## RELEVANT EXTRACURRICULAR & PROJECT EXPERIENCE

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### Altera FPGA Projects, Ann Arbor

- Programmed a Four Function Calculator that does basic math operations on Altera using RTL Design with Verilog.
- Implemented an efficient Traffic Light Controller that integrates sensors to efficiently directs traffics using the idea of FSM.
- Pictures and details of the Altera FPGA projects can be found in <https://ycpoon.github.io/academicjourney/>

### Agents of Tech, Taylor's University

Oct. 2022 – Oct. 2023

*President*

- Led in curating tech workshops and training sessions on topics such as React and Arduino for over 200 like-minded club members.
- Hosted the biggest hackathon in college's history with 200+ participants and cash prizes amounting to more than \$7k.
- Secured sponsorships amounting to \$25k from 7 different tech companies and partnerships with Intel, Google, and Samsung.

### Other Experiences, Personal Projects, and Accomplishments

- Check out <https://ycpoon.github.io/> for the full list of experiences and personal projects.
- *Other Experiences:* Michigan Hackers Embedded Systems Team Co-Lead, Young Malaysian Engineers Finance & Sponsorship
- *Personal Projects:* 1) Worked on a project to build cheap \$80 computers with Raspberry Pi as an initiative to provide underprivileged children with access to computers. 2) Developed an LED roulette game machine with Arduino.
- *Accomplishments:* 1) Secured sponsorship totaling up to \$100k. 2) Competitions won: MSTW 2021 Hackathon, Kuala Lumpur Engineering & Science Fair.

## ADDITIONAL INFO

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**Technical Skills:** C/C++, Python, HTML, MATLAB, Verilog, VLSI, Arduino, Embedded C, React, Altium, STM32Cube

**Language:** English, Chinese, Malay, Cantonese

**Awards:** Best Engineering Student Award, University Honors, Dean's List, Taylor's Excellence Award, Book Prize Award