YAN CHENG POON

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EDUCATION

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: Digital System & Logic Design, Embedded Systems, Microsystems, Chip Design

Taylor's University, Malaysia — May. 2023
American Degree Transfer Program (Engineering), GPA: 3.84, Best Engineering Student Honor

WORK EXPERIENCE

University of Michigan Solar Car Team, Ann Arbor — Aug. 2023 – Present
Microsystems and Firmware Engineer
- Designed the circuit 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 response rate 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
- 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 of a drone.
- Contributed to the software integration of infra-red and LiDAR sensors onto drones using Arduino and Embedded C programming.
- Performed research & analysis into emerging drone and chip technologies, tailoring drone solutions 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

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

Embedded Systems Team Co-Lead - Michigan Hackers, Ann Arbor
- Led a team of 20 members in building Arduino projects such as a LED roulette machine and a password-protected digital lock.
- Reviewed and improved firmware codes and circuit designs to ensure optimal functionality of the embedded device.
- Spearheaded the software and hardware integration of sensors, cameras, and speakers onto the Arduino project.

President - Agents of Tech, Taylor's University
- 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.
- *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, KLESF

ADDITIONAL INFO

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