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Po-Chun Wu

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Education

National Taiwan University (NTU) **Aug 2022 — Jan 2026**
Bachelor of Science in Engineering – Electrical Engineering (NTUEE) *Taipei, Taiwan*

- Grade Point Average: 4.16/4.3 (12%)
- Credit Program: Creativity and Entrepreneurship Program, NTU, Sep 2024 — Jun 2025
- Relevant Coursework: Soc Verification, Algorithms, Computer Architecture, Electronic Circuit Design, and Courses on Entrepreneurship
- Ongoing Courses: Electrical Engineering Lab (Digital Circuit), Introduction to Electronic Design Automation, Machine Learning

Skills

Specialties	Formal verification, system design and modeling, digital design, full-stack software development
Technical	Python, JavaScript, C++, Verilog, MATLAB
Soft Skills	Maker innovation, startup leadership, public speaking

Research Experience

Using Formal Verification to Solve Graph Problems **Apr 2025 — Jun 2025**
Advisor: Prof. Chung-Yang Ric Huang, NTU

- Formulated the problem of the most efficient sequence for learning a vocabulary set in a natural language as an NP-hard variation of the Target Set Selection problem.
- Used bounded model checking (BMC) and other formal verification techniques to find optimal solutions for small instances of the problem.

SAR ADC and PLL design **Aug 2024 — Dec 2024**
Advisor: Prof. Tai-Cheng Lee, NTU

- Modeled and analyzed SAR ADC architectures in MATLAB, focusing on DNL, INL, and ENOB improvements.
- Devised a circuit simulation program in MATLAB to analyze time-domain and frequency-domain responses of Phase-Locked Loops (PLLs), exploring the effects of bandwidth, gain, and phase detector architectures on system behavior.

Separation and Transfer of Monolayer Molybdenum Disulfide **Dec 2020 — May 2021**
Advisor: Prof. Chia-Hao Chen, National Synchrotron Radiation Research Center

- Investigated the effects of UV light, heating, and ultrasonic treatment on the yield of monolayer MoS_2.
- Developed a novel process that shortened the preparation time of monolayer MoS_2 from two weeks to one hour.

Work Experience

Product Developer, SLEKMED **Aug 2023 — Feb 2025**
SLEKMED, an education startup

- Collaborated with medical students to develop a web-based medical diagnosis and training platform using Next.js.
- Delivered lectures on basic programming and algorithm applications as part of SLEK's *University Exploration Program for High School Students*.

Startup Experience

Co-founder and CEO, Synality **Dec 2024 — Feb 2025**
Synality, a matchmaking startup

- Led a team of 3 cofounders to develop a matchmaking platform that uses psychological principles to enhance user compatibility.
- Went through 3 rounds of Minimum Viable Product (MVP) development and marketing surveys, gathering user feedback and performing cohort analysis.
- Used Next.js to build the full-stack web application and launched it in 10 days.

Team Lead, NTUCTC Team **Sep 2024 — Dec 2024**
Creative and Entrepreneurial Program at NTU

- Led a team of 6 members to go through the design thinking process of the early phases of a startup.
- Pitched to a panel of judges about a platform for creating innovations from recycled furniture.

Awards

First Place, Silicon Motion Corporate Award **May 2025**
2025 MakeNTU Competition

- Used Raspberry Pi and computer vision techniques to create a *robotic chameleon* that tracks and catches cockroaches.
- Finished the project from the first line of code to the final presentation within 24 hours.
- Awarded first place by the judging panel sponsored by Silicon Motion.

First Place, 2024 CTCI AI Competition **Dec 2024**
2024 CTCI AI Competition

- Collaborated with SLEK members, using large language models to build an AI patient simulator and environment for medical training.
- Won first place among 40+ teams from universities across Taiwan.

Best Maker Award **May 2024**
2024 MakeNTU Competition

- Created a navigation assistant mounted inside a motorcycle helmet, using speech recognition and AR technologies to help riders navigate safely.
- Awarded Best Maker among 40+ teams from various universities.

Side Projects

Light Bike **Sep 2024**
An LED show mounted on a bicycle

- Used LED strips and a D1 Mini microcontroller to build a programmable light show that can be remotely controlled via a website.

NTU Food **May 2024**
A random food selection website for NTU students

- Built a website using *vanilla* JavaScript that helps NTU students randomly select food options on campus.
- The website was featured in a famous Taiwanese YouTuber *Joeman*'s video reviewing NTU food options.

Virtual Makerspace **Aug 2023**
An online replica of the NTUEE Makerspace

- Initiated the project and led a 25-member development team to build a comprehensive Makerspace management system using React and Node.js.
- Implemented features such as equipment reservation, inventory tracking, and online equipment usage training to streamline operations.
- Mentored team members in web programming.

NTU Pair **Feb 2023**
Matchmaking website

- Used *vanilla* JavaScript to solely build a full-stack website from scratch that reached over 1,000 users.

Extracurricular Activities and Volunteer Work

Founder and President, NTU Learning Optimization Club **Aug 2023 — Jun 2025**
- Conducted research and experiments on active recall and other learning methods.
- Delivered 5 speeches in high schools and student associations across Taiwan on how to learn effectively.

Lecturer, Academic Department, NTUEE Student Association **Sep 2023 — Jun 2024**
- Led a core team to organize 25 lectures and speeches in the Student Association.
- Taught maker skills such as Arduino and 2D manufacturing on OpenCourseWare.
- Manager of the NTUEE Makerspace.

Leader, Advanced Teaching Group, NTUEE Camp **May 2023 — Jul 2023**
- Led a team of 20+ members to design projects for high school students to learn programming and electronics.
- Designed a light-tracking *Sunflower* robot using Arduino and light sensors, serving as the final project for students.
- Organized and managed the mass-production pipeline for 150+ robot kits.
- Taught Arduino to 120 high school students during the summer camp.