

Po-Sheng Cheng

Master of Industrial Design, Rhode Island School of Design (RISD), Jun. 2026

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[Online Portfolio Link](#)

B.Sc. Bio-Mechatronics Engineering & B.A Economics,

National Taiwan University (NTU), Jan 2023

Notable Skills

- Electronics: STM32, Arduino, ESP32, Raspberry Pi, system interface (I2C, SPI, UART), PCB design.
- Mechanical: CAD (SolidWorks, Fusion and Pro/E Creo), rapid prototyping (FDM/SLA 3D Printing)
- Coding: C++, Java, JavaScript (Express, React), Dart (Flutter), Python (PyTorch, NumPy), Git
- Concept generation: Rhino, Keyshot, Figma (Wireframing), Adobe Suite

Experiences

Apprentice, Google Hardware Product Sprint, Jun. - Sep. 2024

Taipei, Taiwan

- Led a team of 5 to design a Hardware as a Service platform for managing lost items in public facilities. Laid out the system architecture for both the hardware kiosk and the web services.
- Drove the development direction from a single product to a platform system by showcasing several prototypes built with microcontrollers in combination with mobile app and HTTP web services.

E-Lab Research Assistant, RISD Industrial Design, Feb. 2024 -

Providence, RI

- Fostered literacy of technology in RISD by working with professors and department leaders to design devices and curriculums in topics like electronics circuit, Arduino/ESP32, RESTful API and web backend development and mobile app development.

(Publication) TeleShift: Telexisting TUI for Physical Collaboration & Interaction

Andrew Chen, Tzu-Ling Yang, Shu-Yan Cheng, Po-Sheng Cheng, Tzu-Han Lin, and Kaiyuan Lin. 2022. This work received the **Best Demo Award** at Ubicomp/ISWC 2022 Conference, <https://doi.org/10.1145/3544793.3560323>

- In this research, my implementation of a shape-transforming device with a 3D tangible user interface (TUI) was the key that enabled this work to be published and awarded at ACM Ubicomp.
- Laid out the system architecture of the device with ESP32 microcontroller, potentiometers, DC motors, etc. I also implemented the mechanical design (SolidWorks) and power supply circuit of the prototype.
- My design for manufacturability (DFM) improvements slashed assembling time by 80% compare to the previous generation.

Electro-mechanical Engineering Intern, Logitech, Feb. - Jun. 2022

Hsinchu, Taiwan

- Created a brand new breed of keyboard technology by conducting robust user research with 50 interviewees and innovating a microcontroller-based prototype to control actuators like stepper motor and electromagnet. Also lots of CAD (Creo) and SLA/FDM prototyping on mechanical design.
- The technology received widespread praise by many departments (pm, engineering, design) in the company while I gained strong familiarity with the NPI (New Product Introduction) process in the tech industry.

College Student Researcher, NTU, Jul. 2021 - Feb. 2022

Taipei, Taiwan

- Developed a novel, integrated spectral mapping system that vastly accelerates scientific spectral measurement by being involved in research projects in the institution to understand the bottleneck of existing workflow.
- By using linear dispersion optics and optimizing the EMCCD readout algorithm in LabVIEW and C++, the scanning time was reduced by 26%.
- Awarded the **2021 Technology Innovation Award** by CCMS, NTU and **College Student Research Creativity Award** by National Science and Technology Council of Taiwan with this project.

Project Lead, Bio-Electromagnetics Laboratory, NTU, May. 2020 - Jul. 2022 Taipei, Taiwan

- Designed an device to monitor the amount of bugs in farm fields with a custom PCB and rigorous mechanics.
- Created a git-based collaboration workflow for SolidWorks and a Notion-based BOM managment system to help me track quotes from vendors as well as the changes in design.
- Technical aspect involved industrial automation, IoT with Arduino (XBee), PCB design (Altium), SolidWorks and MySQL.