Po-Sheng Cheng

Online Portfolio Link

Master of Industrial Design, Rhode Island School of Design, Jun. 2026
B.Sc. Bio-Mechatronics Engineering &
B.A Economics, National Taiwan University (NTU), Jan 2023

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 recieved the **Best Demo Award at Ubicomp/ISWC 2022 Conference**, https://doi.org/10.1145/3544793.3560323

- In this work, I designed a shape-transforming device called TeleSHift with a 3D tangible user interface (TUI) for group-based collaboration.
- My contribution were mechanical design with extensive CAD (SolidWorks), iterative improvements to design for manufacturability (reducing assembling time of the prototype to 1/5) and FDM rapid-prototyping as well as the control circuit.

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

- I interviewed 50 students to understand their needs for gaming keyboard and identified an opportunity for innovation then designed three prototypes to demonstrate it.
- My prototyping works mainly includes mechanics design with Creo, SLA rapid-prototyping and electronic circuit as well as constantly engaging with the New Product Introduction teams across different departments in the company.

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

- I developed a novel spectral mapping system called HSI that vastly acclerate the reserch workflow of spectral measurement. (Ex. up to 26% reduction in scanning time.)
- By being involved in several research projects in the institute, I was able to understand the needs and bottleneck of existing workflow and to develop a one-stop, integrated solution.
- Techincal aspect: software dev., image processing and system integration.
- I was awarded the **2021 Technology Innovation Award** by NTU and **College Student Research Creativity Award** by National Science and Technology Council of Taiwan with this product, HSI.

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

- I designed an IoT machine to monitor the amount of bugs in farm fields including its PCB and mechanics.
- I performed extensive CAD design for the mechanics with SolidWorks. I 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.

Golden Medalist, 19th Mobileheroes Award, Sep. - Dec. 2020

Category of 5G Application, awarded USD$10000 by Industrial Development Bureau of Taiwan.

- Our team ARGO developed a AR platform that utilizes advanced image-based spatial recognition algorithm which enables real-time AR interactions on personal mobile devices. My main contribution was UI evaluation and design of the AR world for demo.