Po-Sheng Cheng

Master of Industrial Design, Rhode Island School of Design, Jun. 2026
B.Sc. Bio-Mechatronics & 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.
- The design process involved extensive modeling of the mechanical design (SolidWorks), iterative improvements to design for manufacturability (reducing assembling time of the prototype to only 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 showcase it.
- My work mainly includes mechanics design with Creo, SLA prototyping and electronic circuit as well as constantly engaging New Product Introduction team in many different departments (PM, EE, ID) in the company.

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

- I developed a novel spectral mapping system called HSI that vastly acclerate the workflow of spectral measurement reserch in the institute. (Ex. up to 26% reduction in scanning time.)
- By being involved in several research project in the institute, I was able to understand the needs and bottleneck of current 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 CCMS, NTU and **College Student Research Creativity Award** by National Science and Technology Council of Taiwan (USD$660) 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 with inhouse-designed microcontroller PCB and mechanics.
- I performed extensive 3D modleing and simulation for the mechanical design 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 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 has 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.