

## Educations

- 2023 – 2025  
(Expected) **National Tsing Hua University (NTHU), Taiwan, Information Systems and Applications (Masters),**  
Thesis Topic: Immersive Multimedia Streaming in Next-Generation Mobile Networks,  
Advisor: Cheng-Hsin Hsu.
- 2019 – 2023  
(Expected) **National Tsing Hua University (NTHU), Taiwan, Interdisciplinary Program of Electrical Engineering and Computer Science (Bachelor).**  
GPA: 3.72/4.3

## Research Interests

**Multimedia Networking, Immersive Video Streaming, Virtual Reality, Augmented Reality, and Wireless Networks.**

## Publications

- Y. Sun**, I. Huang, Y. Shi, W. Ooi, C. Huang, and C. Hsu. *A Dynamic 3D Point Cloud Dataset for Immersive Applications*, in *Proc. of ACM SIGMM Conference on Multimedia Systems (MMSys'23)*, Vancouver, Canada, June 2023, Dataset Paper.
- K. Lee, J. Fang, **Y. Sun**, C. Hsu. *Modeling Gamer Quality-of-Experience Using a Real Cloud VR Gaming Testbed*, in *Proc. of ACM International Workshop on Immersive Mixed and Virtual Environment Systems (MMVE'23)*, Vancouver, Canada, June 2023.
- Y. Sun**, S. Tang, C. Wang, and C. Hsu. *On Objective and Subjective Quality of 6DoF Synthesized Live Immersive Videos*, in *Proc. of ACM Workshop on Quality of Experience in Visual Multimedia Applications (QoEVMA'22)*, Lisbon, Portugal, October 2022.
- S. Tang, **Y. Sun**, J. Fang, K. Lee, C. Ting, and C. Hsu. *Optimal Camera Placement for 6 Degree-of-Freedom Immersive Video Streaming Without Accessing 3D Scenes*, in *Proc. of ACM Workshop on Interactive Extended Reality (IXR'22)*, Lisbon, Portugal, October 2022.

## Experiences

- 2021 **Research Assistant at Networking and Multimedia Systems Lab in NTHU.**  
I have worked on several immersive multimedia projects, includes "Immersive Video Streaming for 6 Degree-of-Freedom Interactions", "Optimal Camera Placement for 6 Degree-of-Freedom Multicast of 3D Scenes", and "Enabling XR Cloud Gaming in 6G Cellular Networks". In the "Immersive Video Streaming for 6 Degree-of-Freedom Interactions" project, I worked on the usage and measurement of the immersive video coding standard called MPEG Immersive Video (MIV) and its reference software, which is Test Model for Immersive Video (TMIV). In the "Optimal Camera Placement for 6 Degree-of-Freedom Multicast of 3D Scenes" project, I worked on the problem to design the camera placement strategy, which is able to provide high quality synthesized video quality in limited network conditions. In the "Enabling XR Cloud Gaming in 6G Cellular Networks" project, I dealt with the 5G VR testbed for cloud gaming testing, which provide us a realtime experiment environment to control network conditions, client conditions, and server conditions.

2021 **NTHU Student Cluster Competition Team Member.**

The goal of this team is to training and selecting team members for the APAC HPC-AI Competition. I have learned the concepts of Computer Architecture, Operating System, Network, and Parallel Programming in the hands-on experiments. I also got familiar with installing and using the Linux OS (CentOS), Network Address Translation (NAT), Network File System (NFS), and Message Passing Interface (MPI).

2020 **Dazzle Corporation Website Frontend Develop.**

This goal of this project was to develop a website with both frontend and simple backend for a manufacturing company which is called DAZZLE. In this project, I was responsible for the UI/UX design, frontend development, project management, and client supports. My partner was working on the backend developing. This is the first commercial project that I was involved in. From this project, I have learned the way to develop the website, utilize my knowledge of design in UI/UX design, negotiate with the client and analyze their requirements, the profit, and the cost.

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## Competition and Rewards

2022 **Undergraduate Research Fellowship, Ministry of Science and Technology (MOST), Taiwan.**

My research topic was "Optimal Camera Placement for 6 Degree-of-Freedom Multicast of 3D Scenes".

2022 **NTHU EE Undergraduate Project Competition - Honorable Mention (Top 10).**

The topic of my project was "Immersive Video Streaming for 6 Degree-of-Freedom Interactions".

2021 **APAC HPC-AI Competition 2021 - Second Prize & Special Award.**

This competition was about High-Performance Computing (HPC) and Artificial Intelligence (AI). The goal of this competition was handling the ever-growing demands for higher computation performance and the increase in the complexity of research problems. In this competition, I worked on the research of Deep Learning Recommendation Model (DLRM) and figured out how to set up the environment and tools for it in supercomputer.

2021 **Meichu Hackathon 2021 - Most Feasibility Award.**

In this hackathon, we proposed a Machine Learning based food detection and costing application. In my team, I was responsible the progress planning, UI/UX design, and frontend development. I've learned to cooperate with my teammate and efficiency deal with every emergency problems.

2021 **Hackathon Junior 7th - Third Place (Advanced group).**

The topic of this hackathon was "Sustainable Development Goals (SDGs)", and our team prepared a proposal and a website about this topic in 50 hours. I was responsible for the progress planning, UI/UX design, frontend development, backend development, and presentation. I have learned a lot from this hackathon, including how to be a leader in a team. In this project, I had to deal with not only the development of application, but also how to manage the team and lead them in the right way.

2021 **Shopee Ultimate Case Challenge 2021 - Top 25.**

The topic of this challenge was "Shopee Live", and the goal was expanding the viewer base and increasing order contribution from live-streaming selling. I was responsible for analyzing the live-streaming shopping's data, providing the business model and proposal for my team, and offering design advice according to the requirements. I've learned business models and planning methods to create sound business plans. Besides, it was a good chance to work with the teammate from different departments and with different skill sets.

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## Skills

C/C++, Python, Matlab, HTML, CSS, JavaScript, TypeScript, LaTeX