AN HSU

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Research Focus: Human Agency • XR & Multimodal Interaction • Human–AI Interaction • Inclusive Collaboration

EDUCATION

National Yang Ming Chiao Tung University (NYCU), Taiwan — Expected Jun 2027

Bachelor of Engineering, Arete Honors Program (Computer Science concentration)

GPA: 3.43/4.30 (most recent semester: 4.14/4.30) | **Outstanding Student Award (2025)**

Coursework: Machine Learning, AI, Algorithms, Data Structures, Mixed Reality, Computer Graphics, Design Thinking

PUBLICATIONS & PRESENTATIONS

- Shih, M.-T., Chen, Y.-C., Cheng, H.-Y., **Hsu, A.**, Liang, R.-H., & Chan, L. "AudioAvatar: Synthesizing Gaze through Inferring Conversational Context for Audio-Only Users in Avatar-Mediated Hybrid VR Communication." *Proc. ACM Hum.-Comput. Interact. 10(5), MobileHCI 2026.* doi.org/10.1145/3821699
- Shih, M.-T.*, **Hsu, A.***, & Chan, L. "Spatial Audio and Avatar Representation for Audio-Only Participants in Hybrid VR Meetings." *Poster, APMAR 2026. *Equal contribution*
- **Hsu, A.** & Chan, L. "Developing Non-verbal Behaviors for an MR Tour Avatar." *Poster, TAICHI 2025.*
- Zhang, S.-Y., Zheng, Y.-Q., Lin, L.-J., **Hsu, A.**, Zheng, T.-Y., Wei, Z.-Y., Fu, Y.-T., & Li, J.-R. "DearPlanet." *Demo, TAICHI 2025.*

RESEARCH EXPERIENCE

Pro-Interaction Lab | NYCU — Feb 2025 – Present

Undergraduate Researcher | Advisor: Prof. Liwei Chan

- **Co-lead a mixed-design user study** (Baseline / Mono / Spatial audio; participant triads) on audio-only participants in hybrid VR meetings, measuring co-presence, turn-taking, and mutual gaze (co-first author; APMAR 2026 poster, paper under submission).
- **Built the study's head-tracking pipeline,** tracking audio-only participants' head motion with Vive Ultimate Trackers in Unity.
- **Designed and built an MR museum guide** (Unity, Quest 3) with position-adaptive avatar non-verbal behavior (TAICHI 2025).

Neural Engineering Lab | NYCU — Mar 2024 – Feb 2025

Undergraduate Researcher | Advisor: Prof. Li-Wei Ko

- **Developed EEG-based brain–computer interface pipelines** for ADHD screening, focused on signal processing in Python.
- **Designed Save the Kittens,** a 2D attention game validated against clinical tests (CPT, CATA); a user study (N = 11) showed high correlation, and the work was later extended with hospital clinicians.

Data Intelligence Lab | NYCU — Sep 2023 – Feb 2024

Undergraduate Researcher | Advisor: Prof. Vincent S. Tseng

- **Built and benchmarked attention-based deep learning models** for wearable-sensor activity recognition (93–95% accuracy).

PROJECTS

DearPlanet | OpenHCI Camp — Aug 2025

Unity Technical Lead, six-person team

- **Led the full Unity implementation** of an LLM-powered parent–child storytelling experience with AI-driven story flow.
- **Won OpenHCI Best Interaction Award**; invited to demo at TAICHI 2025; design informed by 5 new-parent interviews.

Debatometer | iOS App — May 2023

- **Independently designed and shipped** an App Store debate timer for the IBSC Debate Team (Asian/British Parliamentary).

INDUSTRY EXPERIENCE

Microsoft Taiwan | Public Sector — Sep 2025 – Aug 2026

Technical Assistant Intern

- **Built a multimodal Azure AI document-extraction proof of concept** for an electronics manufacturer.
- **Led an 8-person team** to run technical workshops for 400+ applicants, achieving a 95% satisfaction rate.
- **Lectured 10+ workshops** and delivered Power Apps and Copilot demos to 100+ government officials and students.

LEADERSHIP & TEACHING

Mentor, English & Public Speaking | FRC Team 7636 (alma mater) — English public speaking for judging — Ongoing

Technical Planner | TEDxNYCU — designed and built an Arduino sound installation — Oct 2023 – Feb 2024

TECHNICAL SKILLS & RESEARCH METHODS

Programming: Python, C++, C#, Swift, Java, mySQL

Tools: Unity, Meta Quest 3, Meta Avatars SDK, Arduino, Azure, PyTorch, TensorFlow, EEGLAB, Git, MySQL

Research Methods: Within-subjects user studies, questionnaires (presence, NASA-TLX), interviews, EEG processing