Cheng-Yan Tsai

College Station, TX | +1 9795748872 | crescentmax@tamu.edu | https://crescentmax.github.io/

WORK EXPERIENCE

Graduate Research Assistant (Unreal) Feb 2025 – Present
Soft Interaction Lab – Texas A&M University

CineDesk
- Created a touch-input interface for virtual production, recognized and reported by Texas A&M University.
- Integrated tangible controls (SpaceMouse) to enhance precision and user interaction.
- Delivered 12 core features (translation, lens adjustment, preview) that streamlined staging efficiency.

Forensic Nurse Training
- Implemented game logics and introduction for an interactive mock-trial within a 5-person team.
- Enhanced training realism by integrating haptic gloves into VR application, enabling tactile feedback.

Game Programmer (Unreal) Aug 2023 – Jul 2024
Winking Studios

Project Kyzen
- Developed a metaverse project using Scrum method, delivering 2 versions on schedule.
- Coordinated with a 40-person international team, ensuring effective cross-cultural communication.

Unannounced AAA Project
- Designed and built 3 core gameplay systems in an AAA game with a 30-person team.
- Introduced a new dialogue implementation pipeline, accelerating narrative iteration speed by 35%.
- Implemented a general interaction framework adopted by 3 teams to unify gameplay interactions.

Undergraduate Research Assistant (Unreal) Jul 2021 – Dec 2022
CGV/MIS Lab - National Tsing Hua University

- Created a real-time ray-tracing renderer for AI virtual staging using JSON configurations.
- Boosted rendering efficiency by over 60% with a new Unreal-based high-speed rendering procedure.
- Enhanced humanoid robot accuracy by 20% in dual-hand manipulation tasks with 1000+ synthetic images.

PROJECTS

Digital Twin for Retail Stores (Unreal) – Framework to optimize store operations & customer experiences.

Physically Based Simulations (Unreal/OpenGL) – Real-time rigid/soft body, fluid, and flocking system.

Lucid Dive (Unity) – 2D action platformer on itch.io with 1800+ views; Best Graphics & Best Music Design

Orbitone (Unity VR) – VR rhythm game; won 2nd place out of 15 teams in VR competition.

EDUCATION

Master of Computer Science *(GPA: 3.83/4.0)* Aug 2024 – May 2026
Texas A&M University, College Station - U.S.

Bachelor of Science, Interdisciplinary Program of EECS *(GPA: 3.87/4.3)* Sep 2020 – Jun 2023
National Tsing Hua University – Taiwan

Bachelor of Science in Computer Science, Transferred *(GPA: 3.46/4.0)* Sep 2018 – Jun 2020
Huazhong University of Science and Technology – China

SKILLS

Programming: C/C++, Python, OpenGL, Unreal, Unity, Godot, Ruby, HTML, JavaScript

Graphics & Tools: Blender, Houdini, Substance Designer, Procreate

ACTIVITIES & LEADERSHIP EXPERIENCE

Co-founder & Vice President - *NTHU Game Developer Club* Jun 2022 – Jun 2023
- Led a team of 10 members and organized multiple weekly game development workshops.