# Cheng-Yan Tsai

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# **EDUCATION**

Texas A&M University, College Station - U.S.

Master of Computer Science

National Tsing Hua University – Taiwan

Sep 2020 – Jun 2023

Bachelor of Science, Interdisciplinary Program of EECS (GPA: 3.87/4.3)

**Huazhong University of Science and Technology** – China

Completed 70 credit hours of courses in Computer Science (GPA: 3.46/4.0)

Sep 2018 – Jun 2020

Aug 2023 – Jul 2024

## **SKILLS**

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

## **WORK EXPERIENCE**

Winking Studios – Taiwan

Game Programmer (UE5), Full Tim

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%.

National Tsing Hua University - Taiwan

Jul 2022 – Jan 2023

Jan 2020 - Feb 2020

Teaching Assistant for Game Programming (22Fall)

• Led multiple lab sessions, and rewrote over 400 pages of teaching materials for Unity 2021.

IvyMaker – China Teaching Assistant for Programming Courses

• Conducted weekly C and Python programming lessons for 9 high school students.

# RESEARCH EXPERIENCE

**CGV/MIS Lab** - National Tsing Hua University

Undergraduate Research Assistant

#### **Topic: Interior Architecture Renderer using Unreal Engine 4**

Jan 2022 – Dec 2022

- Created a real-time ray-tracing renderer for AI virtual staging using JSON configurations.
- Boosted rendering efficiency by over 60% with a new high-speed rendering procedure.

# Topic: Synthetic Liquor Data Generation via Unreal Engine 4

Jul 2021 – Dec 2021

- Implemented real-time caustics using Unreal Engine 4 for synthetic liquor data generation.
- Produced over 1000 images for duel-hand humanoid robots, enhancing their accuracy by 20%.

## **HONORS & AWARDS**

• Best Music & Graphic Design in Taiwan Student Innovation Game Design Competition Jan 2022

• 2nd Place Award in Scholarship for Macao, Hongkong and Taiwan Students

Dec 2018 & Dec 2019

• Top 12 out of 120 teams in Hackathon 'hack init()'

Jul 2018

## **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.

#### Lecturer - NTHU ACG Club

Sep 2021 – Jun 2022

• Delivered over 10 digital art workshops, covering topics such as gesture drawing and color theory.