

Ming-Fen (Jing) Chung

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SUMMARY

Game developer with a special interest in VR/XR experiences and extensive experience integrating novel input/output mechanics, including sensing, haptics, and real-time object interaction. Computer science background with expertise in Unity and C/C++, passionate about rapid prototyping interaction frameworks and modular software systems.

SELECTED PROJECTS

Cooperative Tangible MR Escape Room

Jan 2026 – Present

Lead Programmer & Technical Designer · Carnegie Mellon ETC

- Built a real-time object tracking system using **OpenCV** fiducial marker detection and **Meta Passthrough API** on Meta Quest 3, supporting **50+** recognizable physical objects across interactive puzzles
- Reimplemented OpenCV's native multi-threading pipeline to significantly improve the frame rate up to **72fps**

Under Cover | Global Game Jam 2026

Feb 2026

Technical Designer & Programmer

- Developed a 1v1 competitive strategy game in 48 hours using C#/Unity, focusing on high-speed cognitive interaction

In The End

Sep – Dec 2025

Lead Programmer & Technical Designer · Carnegie Mellon ETC

- Designed a **haptic gameplay mechanic** on Meta Quest 3 where haptics serve as the primary driver of emotional response
- Built a hardware-independent system to decouple device-specific logic, and made reusable shader effects to enable rapid iteration

Breathe Deep | Global Game Jam 2025

Jan 2025

Technical Designer & Programmer

- Developed a 1v1 strategy survival game in 48 hours using C#/Unity, focusing on tuning control feeling and strategic game design

Xhaler

Jan – May 2025

Lead Programmer & Producer · Carnegie Mellon ETC

- Designed and integrated a **custom breath-sensing pipeline** (respiratory belt + Arduino), enabling breath as a game input
- Redesigned locomotion from scratch and cut sickness reports by **60%**; optimized Meta Quest 3 performance to sustained **60+ fps**

GO! KART VR

Aug 2019 – Dec 2020

Indie Game Designer & Programmer · Side Project

- Developed a multiplayer VR racing game with motion-feedback chairs, **showcased at Korea VR Festival 2019**

WORK EXPERIENCE

National High School Game Academy (NHSGA)

Pittsburgh, PA

Programming Lecturer

Jun 2025 – Aug 2025

- Designed and delivered a Unity 6/C# **multiplayer curriculum** for **20+** students; served as mentor on shaders and gameplay

Silicon Motion Technology Corp.

Zhubei, Taiwan

Principal Firmware Engineer

Jan 2020 – Jun 2024

- **Architected** foundational codebase and **compiler infrastructure**, significantly reducing build cycle time
- Authored onboarding program that trained **10+** engineers on a new toolchain

FutureTown Inc.

Taoyuan, Taiwan

Gameplay Programmer

Oct 2018 – Aug 2019

- Contributed to **2 shipped VR titles** by diagnosing and fixing avatar motion artifacts through **IK joint rotation rework**
- Designed a client-facing interactive **VR car showcase** with **5** distinct interaction modes

TECHNICAL SKILLS

Game Engines & Platforms: Unity, Unreal Engine 4/5, Meta Quest, HTC Vive

Languages & Multiplayer: C#, C/C++, Python, Photon (PUN), Netcode for GameObjects

XR & Haptics: OpenXR, OpenCV, ArUco, bHaptics, Unity Shader Graph

Hardware & Tools: Arduino, Git, Perforce, Maya, Blender

EDUCATION

Carnegie Mellon University

Pittsburgh, PA

Master of Entertainment Technology

Expected May 2026

National Cheng Kung University (NCKU)

Tainan, Taiwan

M.S. & B.S. in Computer Science and Information Engineering

2017 / 2015