

Yu-Wei Tseng

Tool/Engine Programmer

State, Country | +1 469-268-5457 | dadavidtseng@gmail.com | <https://linktr.ee/dadavidtseng>

SUMMARY

Engine Programmer specializing in C++ and low-level systems. Built a custom DirectX 11 engine with lock-free multithreaded job system, async resource streaming, and embedded V8 scripting runtime. Shipped three titles at SMU Guildhall on teams of up to 53.

SKILLS

Programming Languages: C, C++, C#, HLSL, Python, TypeScript, SQL, LaTeX

Core Systems: Multithreading, Lock-Free Data Structures, Memory Management, Job Systems, Resource Streaming, Behavior Trees

Engine & Graphics: DirectX 11, Unreal Engine 5, Unity, Rendering Pipeline, Bloom/Blur Post-Processing

Tools & Platforms: Git, Perforce, Visual Studio Debugger, Docker, Winsock2, FMOD, Blender, Windows API

Practices: Root Cause Analysis, Performance Profiling, Agile/Scrum, Object-Oriented Design, Design Patterns

SHIPPED TITLES

Corrupted Hollow

Game AI Programmer | Unreal Engine 5.7 | Team of 24

SMU Guildhall GameLab

May 2025 – January 2026

- Designed module-based architecture in UE 5.7 for a 24-person team, enabling parallel feature development.
- Built behavior tree AI using MassEntity and StateTree, driving enemy decisions across encounter types.
- Performed root cause analysis on cross-system build failures, reducing integration issues across teams.

HardDriverz

Game UI Programmer | Unreal Engine 5.6 | Team of 53

SMU Guildhall GameLab

February 2025 – May 2025

- Developed networked lobby UI in UE 5.6 using UMG, supporting real-time player sync and session management.
- Collaborated with programmers, artists, and designers to debug cross-system issues and ship on schedule.

PlanetPainter

Gameplay Engineer | Unity | Team of 5

SMU Guildhall GameLab

August 2024 – January 2025

- Architected service layer with Zenject DI across 19 assembly definitions, signal bus, and memory pooling.
- Implemented async scene loading via Addressables/UniTask, 6-handler player system, and tilemap painting.
- Designed ScriptableObject-driven level config for doors, switches, and player spawns across 8 levels.

PROFESSIONAL EXPERIENCE

CtrlS Ltd.

Junior Software Engineer

Tainan, Taiwan

November 2023 – June 2024

- Developed 360-degree AR streaming video app in Unity for Android, deployed to client production environments.
- Built serious games for Android with touchpad and digital pen input, delivering training tools used by clients.
- Implemented MVC and service locator patterns using Zenject and UniRx in Unity, improving code maintainability.

PERSONAL PROJECTS

Daemon Engine

C++ | DirectX 11 | V8 JavaScript Engine | Winsock2 | FMOD

August 2024 – Present

- Built custom game engine in C++ with DirectX 11 rendering, bloom/blur post-processing, and multi-pass lighting.
- Implemented multithreaded JobSystem with lock-free SPSC ring buffers and bitfield-based task claiming.
- Designed async resource streaming with double-buffered state containers and thread-safe GPU upload deferral.
- Built 8-level async logging system with dedicated log thread, smart file rotation, and multiple output devices.
- Embedded V8 JavaScript runtime with ES6 modules, hot-reload file watcher, and Chrome DevTools debugger.

DaemonChess

C++ | DirectX 11 | TCP | Winsock2

May 2025 – July 2025

- Developed networked 3D chess in C++ with TCP client-server using non-blocking Winsock2 sockets.
- Implemented full chess rule engine with Blinn-Phong shading and raycast-based piece interaction.

DaemonWindows

C++ | DirectX 11 | Windows API

May 2025 – Present

- Built multi-window action game using Win32 API in C++, treating window instances as game objects.
- Implemented wave-based survival with shop upgrades and boss encounters on custom engine.

Autonomous Game Engineering Network for Task Synthesis

C++ | TypeScript | Python | WebSocket

July 2025 – Present

- Architected multi-agent orchestration platform in C++ and TypeScript with task decomposition.
- Built real-time monitoring dashboard with WebSocket for system diagnostics and event streaming.

EDUCATION

Southern Methodist University Guildhall

Master of Interactive Technology in Digital Game Development, Software Development

Dallas, Texas, USA

Aug 2024 – May 2026

National Cheng Kung University

Bachelor of Architecture

Tainan, Taiwan

September 2017 – June 2023