Ta "David" Yu

Game Developer, Gameplay/Tools Programmer
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EXPERIENCE

BearBone Studio, Remote – Freelance Game Programmer
July 2023 – Present

- Contribute to the development of the narrative indie title, Minds Beneath Us. Joined the team during its late stage. Proactively resolves bugs and improves development tools.
- Architected and implemented a GitLab CI/CD pipeline for building players, ensuring effortless deployment to Steam triggered by Git events or on a scheduled basis.
- Refactored the FMOD-based audio system. Successfully identified and resolved a memory leak issue in the legacy audio implementation, resulting in a reduction of approximately 2.0 GB in memory usage at the end of each level.
- Designed and built a system to dynamically load/unload sprite animations into animators using Addressables, reducing unnecessary memory usage by up to 1.5 GB on average.

Endless Clouds, Remote – Contract Game Programmer
August 2023 – October 2023

- Collaborated closely with the game director on the prototype feature branch of an upcoming PvP brawler, Capsule Heroes, which is developed with Unity and Photon Fusion.
- Successfully refactored several existing game systems, originally developed during a company game jam, to optimize production pipeline support. This includes refining touch input, introducing death screen interface, building modularized skill telegraphing system, and implementing a suite of level editing tools.

DYEngine (Game Engine), Remote – Solo Developer
November 2022 – Present

- Developed a 2D ECS game engine in modern C++, utilizing SDL2, OpenGL, Dear ImGui, and EnTT.
- Implemented a scene editor with support for undo/redo operations and play mode testing.
- Built a custom code generator that parses custom macro keywords to generate code for user-defined type serialisation and interface logic for the scene editor.
- Created a custom GLSL syntax parser for managing render state in shader code.
- Designed the render pipeline to support multiple windows in one game application.

Codeglue, Remote – Programming Intern
October 2021 – March 2022

- Successfully ported the Shadowrun Trilogy to all major consoles (PS4, PS5, Xbox One, Xbox Series, and Switch). Worked closely with designers and QA testers and successfully resolved more than 250 bugs with the extensive use of a debugger and the creation of customized tools tailored to tackle specific bugs.
- Programmed an automatic asset replacement tool in Unity that extracts assets from the AssetBundles of the original PC build to substitute them for missing/corrupt resources.
- Navigated and worked with an extensive large legacy codebase, originally created in Unity 4.0 in 2013; needed to manage three projects within a single repository with tangled logic and massive singleton classes.
- Proactively created written documentation to clearly convey issue resolutions and tool usage to both technical and non-technical team members.

Gerritory, Remote – Lead Programmer, Designer, Artist
October 2017 – October 2020

- Released on Steam and Nintendo Switch and has won several game awards since its debut.
- Led a team of 4 programmers remotely and communicated the requirements for code structure and core mechanics.
- Optimized and ported the game to Nintendo Switch. Including but not limited to draw calls reduction, improving game startup loading time and asset loading optimization.
- Implemented an in-game level editor with box selection, copy/paste, and undo/redo features using command pattern for easier level creation process. Final levels are stored in the level thumbnails using steganography.

EDUCATION

B.A. Digital Games, Game Programming – Cologne Game Lab (CGL), TH Koeln, Germany
September 2019 – July 2023, Graduated (Grade: 1.41, with 1.0 for the final bachelor project)

B.S. Computer Science – National Chiao Tung University (now National Yangming Chiaotung University), Taiwan
September 2014 – June 2018, Graduated (GPA: 3.86 / 4.30)

SKILLS

Development Tools

- Unity: With over 6 years experience, including experience with console porting (Nintendo Switch, Xbox)
- Unreal: Developed a variety of short-term school projects using both Unreal C++ & Blueprint
- SDL2 (with OpenGL), FMOD, Dear ImGui, Entitas, Photon Fusion, EnTT, RenderDoc, Visual Studio, Rider, CLion, CMake, git, GitLab CI/CD, SQL

Programming Languages

- C++: Utilized to implement a custom 2D game engine for my bachelor project at CGL
- C#: Primarily employed in Unity as a scripting language at a professional level
- GLSL/Unity Shader: Complemented by a comprehensive understanding of real-time computer graphics technology, enabling the capability to implement graphics pipeline related optimizations
- JavaScript + ReactJS: Self-learned to build my own portfolio website

Languages

- Mandarin Chinese: Native
- English: Fluent, Professional level

RELATED AWARDS & ACHIEVEMENTS

Gerritory

- Best Design, Taipei Game Show, Indie Game Award 2019
- 2nd Place in Best Student Game, Indieplay China 2018
- Sliver in PC game genre and several other awards, Vision Get Wild 2018
- Official Selection, The MIX Indie Showcase at TGDF 2018

Other

- Academic Achievement Award, National Chiao Tung University