William Ozeas

C# | C++ | Unity | Standard ML | React | Git | Perforce | FMOD | Max/MSP

https://williamozeas.github.io/
williamozeas@gmail.com

Education

Carnegie Mellon University, Pittsburgh, PA, Graduated May 2023

Bachelor of Computer Science and Arts: Computer Science & Music Composition, Minor in Game Design, GPA: 3.98

Relevant Coursework

Computer Game Programming | Game Design, Prototyping, & Production | Computer Graphics | Parallel & Sequential Data Structures & Algorithms | Intro. Computer Systems | Computer Music | Matrices & Linear Transformations | Calculus in 3D

Work Experience

Research Assistant, Entertainment Technology Center at Carnegie Mellon University; Pittsburgh, PA — June-August 2022
- Developed Unity game for President's Cup government cybersecurity competition. Worked with 4 other programmers in a team of over 20 using C#, Perforce, and Mirror for networking the online game.

Software Development Intern, Amazon; Remote (Seattle, WA) — June-August 2020
- Implemented React front end of internal website to help Amazon monitor delayed orders from 3rd party sellers.
- Gained experience working in teams and learning new technology at large companies. Collaborated with other interns and employees to design an API to access an order database.

Projects

C++

Aperture - Graphics, Systems, Gameplay, Audio Programming | *C++*   2022
- Created photo-taking game in team of three in C++ with SDL and OpenGL in CMU Computer Game Programming.
- Personally implemented hardware occlusion culling, forward lighting, shadow mapping, picture grading & object detection, texture & csv pipelines, GLSL shaders for camera depth of field, fog, texturing, & color grading, and more.

Scotty3D - Graphics Programming | *C++*   2021
- Implemented several features in a 3D modeling software, including several mesh transformations, realistic lighting using path-tracing, and animation rigging.

Malloc Project - Systems Programming | *C*   2020
- Implemented memory allocator in C with more efficient throughput and utilization on test cases than the standard C library through aggressive optimization.

Unity/C#

Pig's Blood - Gameplay, Tools Programming, Sound | *Unity, C#*   2023
- Developed detective visual novel with an interdisciplinary team of six as the lead programmer and sound designer.
- Implemented scripting pipeline for visual novel effects and gameplay logic using Yarn Spinner.

Tanks In Advance - Team Co-Lead, Gameplay Programming, Technical Artist | *Unity, C#*   2023
- Managed programming and sound teams & implemented replay main mechanic using command pattern.
- Created several special effects & solved shader/model issues as technical artist.

Giuseppe - Gameplay, Graphics, Audio Programming | *Unity, C#*   2023
- Made a time-traveling puzzle game with an interdisciplinary team of six as the lead programmer and sound designer.
- Implemented several time-travel mechanics and designed an accompanying URP render feature & screen-space shader.

Dimensional Rift - Team Co-Lead, Gameplay & Audio Programming | *Unity, C#, FMOD*   2022
- Managed Programming and Sound teams as Co-Lead, won "Best Sound" and "GCS Gold" (audience choice) awards.
- Implemented building system and dialogue pipeline and helped team members with other systems.

Polyrhythm - All Roles | *Unity, C#, FMOD*   2021
- Created rhythm game solo project as a programmer, artist, and musician
- Designed event system to synchronize music and gameplay using FMOD callbacks.

Activities

Carnegie Mellon Game Creation Society - Consultant, Co-Lead, Programmer, Sound Designer, Composer — 2019-Present
- Created 8 games on teams of 6-14 each semester at Carnegie Mellon. Co-lead two games.
- Held "Consultant" executive role, where I helped organize club and gave a talk about FMOD and adaptive audio.

Code Sample: https://gist.github.com/williamozeas/8b0a425c9ad2cc848d458bb09fa38b3a