

PROFESSIONAL EXPERIENCE

June 2023
-Present

Monolith Productions

Senior Combat Engineer, Wonder Woman

- Takes ownership and responsibility of creating new as well as updating and maintaining existing code systems related to character combat.
- Works with engineers of various other systems to ensure interoperability and cooperation of new and legacy systems to maintain the desired combat experience for the player.
- Regularly meets with combat designers to align on plans and confirm functionality of the implemented mechanics and systems matches the desired design specification.
- Modernizes legacy code for performance, stability, and readability.
- Interviews potential engineers to help determine team-fit and technical proficiency

February 2022
-May 2023

Gameplay Engineer, Wonder Woman

- Improved various existing gameplay and debugging systems, gaining familiarity as needed, both through implementing feature requests and fixing bugs.
- Worked with various other engineers and designers to help load-balance work and improve efficiency of the Gameplay Engineering team.

October 2021
-February 2022

Halfmoon Interactive

Production Lead, Various Projects

- Organized various teams' production schedules and assists in organizing meetings to ensure production targets are achieved.

Technical Lead, Various Projects

- Designed and implemented a distributed server system to handle varying player counts.
- Designed and implemented systems and prototypes in the Unity game engine, the Godot game engine, C++, and Python.

April 2020
-September 2021

343 Industries

Animation Engineer, Halo Infinite

- Diagnosed the cause of bugs in the animation runtime implementation and directly remedied their cause or otherwise mitigated their severity.
- Coordinated with animators to find solutions to production hurdles.
- Wrote and documented readable, extensible, secure, and efficient C++ code using object oriented, data oriented, and functional paradigms.
- Optimized existing systems to hit performance and memory targets across all target platforms.

June 2018
-August 2018

PlanetBravo

Instructor/Camp Counselor

- Taught groups of children ages 8-14 how to develop webservers using Python and Flask and how to create a digital assistant using a Raspberry Pi, Google's Home API, and Javascript.

ACADEMIC EXPERIENCE

January 2020
-April 2020

NES Emulator

Sole Developer (C++)

- Implemented low-level emulation of the Nintendo Entertainment System at the component level from scratch including the CPU's logic, PPU's graphical output, and APU's audio synthesis.
- Researched 3rd party sources of reverse engineering hardware to achieve hardware accuracy including unintended side-effects such as undocumented "illegal" 6502 op-codes.
- Confirmed accuracy through writing test programs and using openly licensed games.

August 2019
- December 2019

Chemistry Engine

Sole Developer (Unity)

- Designed and implemented a system to manage systemic object interactions in the Unity game engine with the goal of being easy for designers to use while yielding high performance.

Bryce Dixon

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ACADEMIC EXPERIENCE (CONT.)

August 2018
-April 2019

Spacetime, 3D Marble Rolling Physics Platformer

Tech Director

- Designed and implemented systems and mechanics in the Unity game engine.
- Worked with other team members to integrate and debug their code contributions.

September 2017
-April 2018

Paper Dream, 2D Metroid-vania Platformer

Producer

- Coordinate the activities of writers, directors, programmers, designers, and other personnel throughout the production process.
- Act as a representative of the team when making requests and submitting milestone reports.
- Conduct meetings with team members to discuss production progress and to ensure production objectives are attained.

Programmer

- Design and implement an abstracted rendering system using OpenGL.
- Design and implement a custom 2D model format for memory efficiency.
- Work with other team members in integrating their systems into the game's engine.

January 2017
-April 2017

.Irun, 2D Physics Focused Platformer

Lead Designer

- Created core game features including mechanics, levels, and UI.
- Conducted regular design reviews and playtesting sessions throughout the game development process.

Producer

- Resolved personnel problems that arise during the production process by acting as a mediator between dissenting parties when necessary.
- Composed weekly production reports detailing current and marginal progress as well as listing future plans for the following week.

Tech Director

- Designed the engine architecture and the roadmap for development.
- Programmed physics, input handling, menus, and rendering wrapper around OpenGL.
- Created tools including a level editor to increase development efficiency.
- Corrected errors by making appropriate changes and rechecking the program to ensure that the desired results are produced.

EDUCATION

2016
-2020

DigiPen Institute of Technology, Redmond, Washington
Bachelor's of Science in Computer Science and Game Design

SKILLS

- Proficiency in various programming languages including: C/C++ (8 yr), C# (4 yr), Python (3 yr), Native 6502 Assembly (1 yr)
- Further familiarity with various programming languages including: Javascript (2 yr), ARM Assembly (2 yr), Lua (1 yr)
- Proficiency in various programming paradigms including: object oriented, data oriented, functional, and distributed computing
- Moderate build automation experience (eg: GNU Make, Scons)
- 7 years of proficiency in multiple popular game engines including Unity and Godot in both high-level and low-level areas of interaction
- Proficiency in various version control solutions including: Git, Perforce, and SVN
- Task tracking and productivity software such as Microsoft Azure DevOps and Atlassian Jira
- Production and Team Management
- Microsoft Windows, Linux (Ubuntu distros), and Apple MacOS (familiar)