

Alexander Kandalaff, Software Engineer

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Languages:

- C++
- C
- C# (Familiar)
- JavaScript (Familiar)
- MySQL (Familiar)

Technical Skills:

- Visual Studio
- STL Data Structures
- Git
- Unreal 4
- Unity
- TCP/IP & UDP Protocols (Familiar)

Non-Technical Skills:

- Working with multi-discipline teams
 - Working knowledge of Linear Algebra, Geometry and Calculus
 - Development using Agile Project Management tools
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Academic Projects

Gameplay Programmer -MEKA

Jan 2019 – Apr 2019

Procedurally generated rogue like built in Unity

- Wrote functionality for gun parts to be procedurally generated
- Allowed for gun parts to be dynamically switched and for the gun stats to be recompiled at runtime
- Developed a system to handle stats, mechanics and modifiers in a modular fashion

Solo Project -Enter The Arena

Sept 2018 – Dec 2018

1st person arena ability slinger developed in Unreal 4

- Wrote functionality for AI to predict where to aim abilities based on target character velocity
- Actors randomly select characters on the enemy team and work together to eliminate their opponents
- Created genericized interface classes to allow for fast ability creation and iteration

Audio and Tools Programmer -Conflux (5 programmers, 2 designers)

Aug 2017 – Apr 2018

1st person, 2 player party game written in C++ in a custom-built, 3D engine

- Developed a Sound Pipeline using the FMOD Studio API that allowed for runtime bank modification
- Wrote logic for randomized ambient sound using FMOD parameters
- Used FMOD to smoothly crossfade between crowd events and ambient crowd background noise
- Implemented UI for an Art Pipeline that allowed for runtime model and texture loading

Audio/Gameplay Programmer -Event Horizon (3 programmers, 3 designers, 1 sound designer)

Sept 2016 – Apr 2017

2D puzzle platformer written in C++ in a custom-built, 2D engine

- Integrated music and SFX using the FMOD Studio API
- Collaborated with the sound designer to fix in game sound bugs
- Implemented custom Memory Manager, increasing fps from 13 to 60
- Built the Game State Manager and the framework for a component-based architecture

Gameplay Programmer -Hyper Drive Action Tank (4 programmers)

Jan 2016 – Apr 2016

2D bullet hell space shooter written in C using the DigiPen Alpha Engine (proprietary)

- Integrated music and SFX using the Low Level FMOD API
 - Designed and implemented the 3-phase final boss fight AI
 - Developed a particle system that recycled game objects to increase FPS
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Education

BS In Computer Science in Real-Time Interactive Simulation

Sept 2015 – Apr 2019

DigiPen Institute of Technology, Redmond WA