Devon Raymond Murray

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Career Objective

Work as a game developer, pushing the boundaries of what makes a game fun through making unique mechanics, intricate sounds, and robust systems. Whether I'm programming gameplay, audio, or tools, what matters most is that I'm passionate and proud about any project I work on.

Qualifications

- C++/C# programmer skilled in real-time systems, software architecture, and linear algebra
- Demonstrated analytical and quantitative problem-solving skills
- Capable of handling large workloads under intense pressure and deadlines

Work Experience

Envrmnt by Verizon – Junior Engine Developer | Remote | June 2021 – Present

Developed BlueJeans Spaces for Windows Platform. (Spaces Ad)

- A Virtual Workspace for people to communicate with co-workers as if they are actually in the office.
  - Created Audio Events and Engine Callbacks for user interactions.
  - Created the Search Bar, Settings, Spaces Sorting, and Onboarding.
  - Various different bugfixes, features, and refactors.
  - Modifications to Engine as necessary for certain tasks (NDA).

Dark Catt Studios – Gameplay Engineer Intern | Saint Charles, IL | Jan. 2019 – June 2019

Credited on *Djinni & Thaco: Trial By Spire.* (Game Page Link)

- A VR Tower Defense game made using Unreal Engine 4 Blueprints. Fend off enemies by pounding the ground, casting spells, and building towers.
  - Debugging and programming enemies, audio systems, and controls.

Education

B. S. in Computer Science – *DePaul University* | Chicago, IL | Sep. 2016 – Mar. 2021

Concentration in Game Systems

Relevant Projects & Coursework

Optimized C++ Multithreading (CSC 362) [C++, WaveOut]

- WaveOut Audio Playback
  - A system that reads multiple audio files, writes to, and stiches together twenty 2K-byte audio buffers, playing them seamlessly, as if it's one file.
  - Simultaneously loads, writes to buffers, and coordinates which/when audio is played. Using Circular Queues, Futures/Promises, and waiting.
- Multithreaded Maze Solver
  - An exercise in making a DFS maze solver faster through parallelization.

Real-Time Multithreaded Architecture (CSC 488) [C++, XAudio2]

Created a Multithreaded Audio API using basic multithreading techniques and software architecture strategies.

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Bumper Ship Showdown (GAM 392) [C#, Unity] – Lead Programmer

A 3D online brawler where players partake in a dangerous sport, that is essentially bumper cars in space with more objectives. This was my capstone project.

- Gameplay, Audio, and Network Programming.
  - Events, Game Modes, UI, Optimization, Debugging
- Music Composition and Sound Design

Modest Engine (GAM 372/GAM 377) [C++, FMOD] (Click for Videos)

Created a Game Engine, during my degree, to help with developing a game. Consists of several core systems as well as Audio research.

- Modest Sound (Audio API using FMOD)
- Game Object System
- Collision System
- Scene Management
- Terrain System
- Math Tools
- Alarm System
- Input System
- Sprites, Fonts, & Screen Logging
- Resource Management

Vox Tanx (GAM 372/GAM 377) [C++, Modest Engine] (Click for Video)

A simple tank game demoing the features of the Modest Engine (see above).

Game Performance Optimization / Optimized C++ (CSC 361)

- Reworked structures to improve memory usage and data caching.
- Enhanced Vector and Matrix math library using SIMD instruction set.
- Developed heap-based memory system for improved data management.
- Created a fast read/write data storing system using OS-native functions.
- Final Project: Refactored 15K particles system for class competition.
  - Implemented SIMD, modified main loop and math systems.

Technical Summary

Programming Languages:	C / C++, C#, Python, Java
Frameworks/ Libraries:	WPF, UE4, Unity, DirectX11, FMOD Core, XAudio2
Agile Platforms:	Jira, Taiga, Trello
Platforms & IDEs:	Windows, Visual Studio
Version Control:	P4V, Git, BitBucket, Tortoise SVN