Michael Clavell

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Gameplay Programmer

Objective

References available upon request

To obtain a full-time position as a gameplay programmer beginning May 2020.

Skills

Programming
- C/C++, C#, Java, Lua, HLSL, Node.js, HTML 5, CSS3, JavaScript, JSON.

Software
- Visual Studio, Vim, Eclipse, VS Code, Microsoft Office, Photoshop, Illustrator, After Effects, Microsoft Windows, macOS.

Engines/Tools
- Unity3D, Unreal Engine 4, DirectX, OpenGL, Monogame, Git, WPF, Windows Forms.

Experience

Software Engineering Intern, *Charles River Analytics* | Cambridge, MA | Summer 2019
- Continued work from the previous summer, bringing a project to near completion.
- Programmed gameplay features and user interactions for a medical training game using Unity3D.
- Polished and refactored old features to be deployment-ready.
- Refactored a Lua scripting environment in a backend engine, making it multi-platform.

Software Engineering Intern, *Charles River Analytics* | Cambridge, MA | Summer 2018
- Recipient of the Great Promise Award for showing exceptional talent and dedication.
- Designed and developed a UI based medical game from scratch using Unity3D.
- Developed and tested a backend simulation library that is currently implemented in a variety of projects.
- Created Unity3D editor tools to assist and streamline the development process.

Counselor, *GreenApple Campus, Olin College* | Needham, MA | Summer 2017
- Instructed children grades 3-9 the Swift programming language through Swift Playgrounds, how to create Augmented Reality and Virtual Reality mobile apps using Unity3D, and how to create Mods for Minecraft using Java.
- Reported and presented students' work to managers and parents.

Projects

Rescue+ Game Engine **— Solo Engine Programmer**
- Solo developed a game engine using C++ and DirectX 11 using an Object/Component model.
- Programmed basic engine features such as a jobs, parenting, bucket-rendering, input handling, shadows, etc.
- Implemented a Nvidia PhysX API wrapper for rigidbodies, colliders, raycasts, and collision callbacks.

Snake on the Water **— Gameplay & Engine Programming**
- Programmed boat movement. swimmer following behavior, buoyancy logic, camera system, and many other gameplay elements
- Created a custom engine for this project using DirectX and HLSL in C++.
- Created a prototype in Unity3D before developing engine and gameplay features that fit the project.

Knight Move 3D **— Gameplay Programming**
- Used a professor's proprietary engine to create an enhanced recreation of *Knight Move* using C++ and OpenGL.
- Programmed the underlying board structure of the game, allowing for easily accessible entity movement and pickup placement.
- Created gameplay systems, scoring, and effects for player actions on the board.

Education

Rochester Institute of Technology | Fall 2016—Spring 2020
- Bachelor of Science in Game Design and Development.
- Minor in Computer Science.
- GPA 3.90/4.0, Dean's List Fall 2016 - Present