SANDY DEMIAN

Programmer

Contact

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https://sademian.github.io/
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Programming

C/C++, C#, Python, Java, Swift, JavaScript, HTML, CSS

Software

Visual Studio, Unity, Unreal Engine 4, Perforce, Houdini, Photoshop, GitHub, Jira, Xcode

Honors/Activities

President's Honor Roll
Dean's List
FIEA Director Fellowship
ACM-W Member
Society of Women Engineers Member

Experience

Izcalli of the Wind - Unreal/C++ **Jan 2020-Present**
Axolotl Productions, Florida Interactive Entertainment Academy
Collaborated with a multidisciplinary team of 16 on an Aztec inspired action adventure game using a hoverboard movement

- Implemented directional paths using splines to add force on the player
- Created an environment system to restore the environment from a neglected form
- Implemented a payload trial challenge system
- Created an in-editor replay playtest tool using network replication
- Created magical energy materials and customizable neglected environment materials

DaVinci Buttonology - Unity VR/C# **Jan-May 2020**
In partnership with Advent Health
Collaborated with a multidisciplinary team of 8 on a VR game using the Oculus Quest to teach medical staff how to use the DaVinci Surgical machine

- Implemented controllers to allow the DaVinci machine to move based on the players hand motion if they are in range and the motion is valid
- Created the game loop to present the player with machine matching scenarios
- Created a script to help save the key frames for the matching machine scenarios

Game Engine - C++ **Jan-May2020**

- Created a data driven game engine with Json scripting, custom runtime type identification, a multithreading event system, and unit tests
- Used observer, chain of responsibility, and factory patterns in the development
- Created replacements for the standard singly-linked list, vector, stack, and HashMap

EEG 3D modeling Application - Python **Jan-Aug 2018**
Undergraduate Capstone Project
Collaborated with a team of 5 programmers to create an application that records EEG data using the Emotiv Epoc+ headset and uses it to build 3D models for artistic purposes

- Implemented the graphics to display the 3D models using OpenGL
- Created an algorithm to build 3D models from EEG data and attach the model base made in Blender to the models made in code
- Implemented the ability to save the models as .stl files

Teaching Assistant, Intro to Computer Science **Jan-May 2018**
University of Central Florida, Orlando FL

- Explained Computer Science concepts to students in an intro programming class
- Helped students in the labs and graded the weekly assignments

Education

Interactive Entertainment, M.S. **December 2020**
Programming Track GPA: 3.80/4.0
Florida Interactive Entertainment Academy
University of Central Florida

Computer Science, B.S. **December 2018**
University of Central Florida GPA: 3.77/4.0