



# SANDY DEMIAN

✧ Programmer ✧



## Contact

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## Programming

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

## Software

Visual Studio, Perforce, Unreal  
Engine 4, Unity, 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

### UI Programmer Intern - C++/Unreal

Aug 2020-Mar 2021

*Epic Games, Remote*

Worked on Fortnite's frontend and in-game UI

- Gained experience working on a large data-driven online game and navigating a large codebase
- Worked on Fortnite's quest system to extend and improve the NPC quests
- Fixed bugs in various areas of Fortnite including the store, locker, HUD, and settings

### Izcalli of the Wind - C++/Unreal

Jan-Aug 2020

*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

### 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-May 2020

- 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 that are procedurally generated

## Education

### Interactive Entertainment, M.S.

Dec 2020

Programming Track

GPA: 3.87

Florida Interactive Entertainment Academy

University of Central Florida

### Computer Science, B.S.

Dec 2018

University of Central Florida

GPA: 3.77