Will Snyder

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Education

BS in Computer Science, **UMD: College Park** Graduation date: August 2019

Relevant Courses: Data Structures, Design and Analysis of Advanced Algorithms, Programming Languages and Paradigms, Game Programming, Parallel and Distributed Computing, Computer Systems, Network Security

Most Valuable Projects:

- ATM-Bank secure protocol simulation written in C (CMSC414-Network Security)
- Full MX-CIF quad-tree implementation in C supporting advanced operations (CMSC420-Data Structures)
- Final project in Unity3D (CMSC425-Game Programming)

Internship Experience

Intern, **Space Telescope Science Institute**, Baltimore MD Summer 2015

- Developed a system that allowed users to generate official documents from templates using a simple web interface, deprecating bloated MS Word/VB based software.
- Structured the backend spine of the system in Groovy on Grails and developed a front-end prototype that remains mostly unmodified in the shipped product.
- Worked weekly with users to fine tune the system's functionality while dealing with considerable limitations of a purely web-based editing approach to formal documents with strict formatting.

Intern, **Space Telescope Science Institute**, Baltimore MD Summer 2016

- Continued project from previous summer, developing full stack support for batch generation of hundreds of documents at a time.
- Set up basic Groovy on Grails infrastructure to support integration of Elasticsearch into the astronomer profile database service. Prototyped the search feature with basic database integration.

Personal Projects

- Developing a 3D modeling application for the **HoloLens** (**Unity3D**) featuring a basic gesture-activated proportional editing tool. Currently adding support for custom gestures using depth sensor data.

- Developed a VR (**Oculus Rift S**) space exploration game (**Unity3D**) requiring a player to methodically collide asteroids to solve a puzzle. The player must control a spacecraft with a virtual joystick while moving objects from afar with hand gestures. Integrates complex physics with VR interactivity.

- Created an audio-based survival game (**Unity3D**) for my CMSC425 final project. In a group with two other students, my responsibilities included creating **Blender** models for the entire level, basic AI, animation and control structure, and, most importantly, designing **a realistic audio occlusion system**.

Skills

Unity3D/C#, ***Git, Java/Groovy, OpenGL*,*** **Blender*, Python, C/C++,** Tensorflow, (* = self taught)