Michael Joseph O'Connell

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Education

University of Florida -- BS in **Computer Science**, Minor in **Digital Arts And Sciences**.   *June 2016 - May 2020*

Relevant Coursework

AI in Computer Games, Game Development, Computational Structures in Computer Graphics, Game Design and Production, Creating Mobile Games, VR for Social Good, Operating Systems, Data Structures, Software Engineering, Databases, Computer Network Fundamentals

Skills

Programing: C++, C#, Unreal Blueprint   *Engines/Libraries:* Unreal Engine 4, Unity, OpenGL
Version Control: Tortoise SVN, Git   *Misc*: State Driven AI, Pathfinding, Behavior Trees, Nav-Mesh Agents

Work Experience

LUMA at Digital Worlds Institute
City Builder - Game Programmer   *September 2019 - April 2020*
- I worked in a group of 20, as one of 4 dedicated programmers to produce an interactive web based city builder for the City of Gainesville to use for zoning law education.
- I developed systems in the **Unity** engine with **C#** to handle building, properties, zoning, and feedback.
- I accelerated development by simplifying our prototype game manager (1000+ lines) into modular classes and methods, smoothing movement in our 3D camera system, and helped standardize our UI Manager.

Lepidoptera Digitization at The Florida Museum of Natural History
Software Engineer   *June 2019 - October 2019*
- I worked in a two person team with guidance from museum researchers to simplify workflows using **Python** while using **Git** for Version Control. Programs included batch renaming, barcode scanning, image manipulation, compression, and a transcription assistant.
- I transformed a 5 minute renaming process per directory to a 30 second, recursively deep renaming process for large sets of data and assisted in cleaning up over 500,000 files of legacy data.

Donald P. Bellisario College of Communications at Penn State University
Game Developer   *September 2018 - March 2019*
- I continued development on a persuasive user-centered **virtual reality** interactive narrative addressing college students' apathy towards the influenza vaccine using **Unity, C#, and Oculus**.
- I was able to deliver a complete product for research use despite my two clients splitting the product into two separate versions, by creating modular classes and a detailed version manager to reduce development time by at least 50%.

Teaching Experience

Game Design Course Assistant   *August 2019 - April 2020*
- I worked as a Course Assistant to assist students new to game development by conducting **monthly tutorials** posted to YouTube, **Q&A sessions**, and creating an **Open Source Git Repository.**
- I also answered students' questions and helped guide them in implementing features and fixing game breaking bugs and have passed down the repository with detailed documentation to be built upon by following Course Assistants.

Recent Projects

GoGnome
Gameplay Programmer   *May 2020*
- I worked in a team of 6 composed of previous teammates from my LUMA internship and Global Game Jam to learn **Unreal Engine 4** development with **Blueprint** and **C++** and create a Simple 3D Platformer game over a 5 day period.
- I was responsible for creating systems for health and collectables. I created my health component in C++ and created methods and events such to handle health modification and create events once health reaches zero. I hooked up my work to Blueprint to allow for rapid prototyping and quick modification from designers without needing to recompile the project.

Space Cats!
Gameplay Programmer   *January - April 2020*
- I developed a 3D On-Rails Space-Shooter Action game in a 2 person team starring cats using **Unity** and **C#** which we published on **itch.io.**
- I designed and scripted game mechanics such as our combat system which I developed with polymorphic components such as health scripts, contact damagers, and added Agent Movement to accompany our targeting AI to allow for up to twice as fast iteration.
- I also created detailed documentation regarding the scope of our game, each gameplay component, and ideas on how we could implement them during pre production and organized development sprints.