John F. Collins III

buckslice@gmail.com

EDUCATION

University of California Irvine **September 2014 - March 2017**

Bachelor of Science in Computer Game Science, GPA: 3.6

- Received University Research Grant of $1,200 for an Educational Virtual Reality Project
- Won $1,000 Grand Prize for optic atrophy detection app built with team during UCI's 2015 MedAppJam
- Seven-time *Dean's Honor List* recipient
- Served as Programming Officer in UCI's Video Game Development Club for 2016-2017 academic year
  - Led bi-weekly programming workshops covering topics such as introduction to Unity, UI scripting, input handling, physics interaction, and procedural generation
  - Created lesson plans and live code examples during workshops

WORK EXPERIENCE

Programmer Analyst II, *UCLA Department of Earth, Planetary, and Space Sciences* **October 2017 - Present**

- Build plotting software to analyze data from NASA MMS mission
- Write data conversion scripts to transform NASA CDFs to our own format
- Launch team github organization and teach members about version control using git
- Setup automatic build system and deployment to website for testing

Graphics Software Engineer Intern, *Glidewell Laboratories* **June 2016 - September 2016**

- Recruited to CAD software team to support development of proprietary 3D C++ graphics engine
- Wrote custom debug logging tool using wxWidgets to increase team efficiency
- Implemented new and updated existing tool commands, including the main translation and rotation tool
- Maintained application stability by fixing bugs and writing unit tests
- Wrote software license key generator and validator

Gameplay Programming Intern, *UCI Institute of Computer Games* **October 2015 - June 2016**

- Developed *Sankofa*, an educational game that teaches players about Akan history and mythology
- Programmed the UI, scene management, character and animation controllers, waypoint-based pathfinding villager AI, Tobii eye tracking support, and various game mechanics
- Optimized and reduced project files, and integrated older minigames into the main game

NOTABLE PROJECTS

Stacked **October 2016 - March 2017**

- Created a 3D Unity local multiplayer boss fighting game as part of my senior capstone game class
- Leveraged playtesting to iterate upon design and gameplay mechanics throughout development cycle
- Implemented two of the three boss battles / AI, camera controller, various player abilities and game mechanics, network serialization code, and much of the UI

Downtown Bazooka **October 2015 - June 2016**

- Developed a custom C++ / OpenGL game engine to make a 3D platforming game as a learning exercise
- Employed multiple shader programs to implement a bloom visual effect and also GPU instancing
- Built a custom physics solution with static, dynamic, and trigger colliders, as well as spatial partitioning

Space Gods **October 2014 - June 2015**

- Developed most core systems, such as character controller, camera controller, planet spawning, local multiplayer support, character selection screen, and other parts of the UI
- Managed 6 other programmers, including Unity instruction

Betwixter **August 2014**

- Wrote a 2D puzzle game in Java for the Ludum Dare #30 weekend game jam competition
- Placed #91 in Innovation, #107 in Fun, and #167 overall, out of over 2,500 entries

RELATED SKILLS: Unity/C#, C++, Python (NLTK, NumPy, PyQt), Java, Lua, Git, Perforce, OpenGL, WebGL, Shaders (GLSL/CG), Oculus VR, Vuforia AR, Maya (MEL), wxWidgets, Matlab, JavaScript, HTML, CSS

OFFSCREEN HOBBIES: Swimming, Running, Reading, Board Games, Piano, Biking, Hiking, Skiing