

John F. Collins III

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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 Earth, Planetary, Space Science Department

October 2017 - November 2018

- Build plotting software to analyze data from NASA's MMS, Insight and other missions
- Write data conversion scripts to transform NASA data to our own proprietary format
- Launch team github organization and teach coworkers about version control using git
- Setup automatic build system and deployment to website for software 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 (PyQt, NumPy, NLTK), 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