Simon Hopkins

GAME DEVELOPER & PROGRAMMER

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EDUCATION

GAMES SIMULATIONS ARTS & SCIENCES/ COMPUTER SCIENCE
Rensselaer Polytechnic Institute
GPA: 3.54
2016 - Present
Danish Technical University
Fall 2018
Park City High School

TECHNOLOGIES

Unity
Unreal Engine 4
Adobe Photoshop
Adobe Animate
Adobe Illustrator
Blender
Microsoft Office
GitHub
Confluence

LANGUAGES

PROFICIENCIES

C++
C#
C
HLSL
WebGL
Python
Java
Javascript (jQuery, AR.js)
HTML/CSS
Unreal Engine Blueprints

WORKING KNOWLEDGE

NodeJS
ExpressJS
Haskell
Prolog

PROFILE

I am a Senior at Rensselaer Polytechnic Institute studying Game Simulations Arts and Science and Computer Science. I am a programmer who specializes in computer graphics and gameplay programming, but frequently branch out and learn new fields such as animation, augmented reality, and UI design as a result of being on small teams. I have worked on multiple games in environments including long term team projects, individual projects, game jams, and undergraduate research positions. I come from an artistic background, so I enjoy working with artists to aid their process as much as I can on the programming side, as well as implement my own artistic creativity by creating unique shaders.

PROJECTS AND EXPERIENCE

GRAVE SHADOWS – Gameplay Programmer, Computer Graphics Programmer
Rensselaer Polytechnic Institute , Troy, NY | Unity| Spring 2018
Worked in a team of 6 over the course of 4 months as the gameplay programmer on Grave Shadows, a 3D Noir Stealth Game.

- Grave Shadows was showcased at RPI's Gamesfest, and was one of 5 finalists in E3's 2019 College Game Competition.
- Created a system which allowed the character to be transformed into a shadow on any wall they projected on, which reused the 3D animations, saving our artist work.
- Created a 3rd person camera system from scratch, a shadow camera system, as well as a system that seamlessly blended them together depending on the game state.
- Worked with our artist to create both a post processing effect and a custom shader that communicated the Noir art style.

DEVELOPMENT TEAM INTERN – Programmer, Game Designer
E-Line Media, Phoenix, AZ | Unity/Proprietary Unity Based Engine | Summer 2019

- Created several small games to be included in the Alpha launch of *The Endless Mission* using their Unity-Based Engine.
- Communicated with my team strategies I used to overcome difficulties with their engine that would then be implemented into the final game.
- Provided owners and investors with an outsider's view of the product capabilities. Explained use cases I came up with and provided my thoughts about future.

COMPUTER GRAPHICS

- Developed a hand-drawn shading look that could be added to any texture using a tonal art map.
- Created HLSL shader that can flatten out any high-poly smooth geometries to achieve a unique low poly, flat lit look without modifying vertex normal.
- Used WebGL to create multiple applications that explored UV mapping, mip mapping, shadows, different lighting systems, recursively generated meshes, and other topics of computer graphics

IS EVERYTHING GOING TO BE ALRIGHT? – Programmer, 3D artist, writer (Individual)
Rensselaer Polytechnic Institute , Troy, NY | Unity| Spring 2017
3D puzzle story game where you can progress through different branches of the story by reaching different, often more difficult, areas of the levels.

- Scanned in collages, which I applied to the UV map to create a unique, tactile art style.
- Used a technique to ensure the branching story was properly represented by the player choices.

ESCAPING THE AMERICAN DREAM – Programmer, Level Designer
Rensselaer Polytechnic Institute , Troy, NY | Unity | Summer 2018
Worked in a team of 5 as the programmer to create an obstacle course game in which you must reach the end without being hit by projectiles or cars.

- Scripted projectiles that launched in an arc, landing at predicted player position
- Designed certain events such as projectile spawning and camera angle changes to only occur when entering certain areas, and communicated to my team this strategy to help them rapidly design levels
- Implemented all animations and character movement scripts

UNDERGRADUATE RESEARCH POSITION – Computer Science With Humanities

- Worked with professor to prototype new Computer Science curriculum which incorporates humanities into a regular Computer Science 1 class.
- Worked as teaching assistant, helping current student debug code and brainstorm solutions to homework.
- Responsible for grading student papers and supplying useful feedback.