Cullen Goodwin-Schoen

Technical Artist

/in/cullengs/ CullenGS Animation cgoodw cgoodw

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21044

Education

Coursework Completed: May 2020

Rochester Institute of Technology (RIT), Rochester, NY

Bachelor of Science, *Game Design & Development*

Minor: *3D Digital Design*

Minor: *Digital Literatures and Comparative Media*

Cumulative GPA: 3.83 Major GPA: 3.96 Dean's List

Skills

Engines: Unreal Engine, Unity, Monogame

Languages: C++, C#, HLSL, GLSL, Python, JavaScript, Java, HTML

Software: Maya, 3DS Max, ZBrush, Substance, Photoshop, Premiere Pro

Work Experience

Co-Owner and Technical Artist- *Curly Tiger Studios, LLC* | June 2020- Present
Game Studio based in Columbia, MD

- Founded a game company to publish, produce and develop games
- Work in Unreal engine using both C++ and the Blueprint system to develop interactions, shaders, animations states, and game logic.
- Design and create original games for sale on Steam

Zone Supervisor- *Gene Polisseni Center* | August 2018- March 2020
Ice Hockey Rink in Rochester, NY

- Managed 40+ student employees providing feedback, training, and guidance
- Oversaw 4000+ guests at hockey games to ensure safety and entertainment
- Resolved issues, sometimes dealing with problematic fans

Projects

TECHNICAL ARTIST | FEB 2020 – APR 2020
Element Smash *3D Tile-matching game in an original DirectX engine*

- Developed an entity, texture, 3D camera, and normal mapping system using HLSL and C++ in DirectX 11
- Added 3D lighting and reflections, including PBR to the engine
- Developed a game loop and menu system for the engine

TECHNICAL ARTIST | FEB 2020-PRESENT
Halloween Nightmare *3D Third Person Horror game in Unreal Engine*

- Created and used custom LODs, HLODs, and Level Streaming to optimize a high-poly open world terrain to run on a given amount of RAM
- Used a variety of color grading and post processing techniques in Unreal to develop a horror-like ambience to the game

TECHNICAL ARTIST | OCT 2019 – DEC 2019
Target Practice *3D FPS in OpenGL with collisions and spatial optimization (C++)*

- Developed a 3D FPS camera with full rotation and WASD movement, using quaternions to prevent Gimbal Lock
- Created data structures to implement menus, track bullets, ammo, and score
- Added, created, and laid out original FBX models of boxes, walls, and barrels into the OpenGL scene with AABB collision detection

DEVELOPER | OCT 2018 – NOV 2018
Hockey Asteroids *2D Asteroids-like Game in Unity and C#*

- Created vector and force-based movement systems for gravity, friction, and acceleration on both the player and obstacles sliding on ice
- Developed a 'shot power' system, with a dynamic UI to represent projectile speed and angle
- Designed and Created all art, menus, and UI elements in Photoshop

Related Courses

- Game Graphics Programming
  - Creating a custom DirectX11 Game Engine
  - Lighting, Materials, Rendering in 3D with HLSL and C++
- Programming for Technical Art
  - Material Optimization, Post Processing, H/LODs, Level Streaming
  - Unreal Graphics profiling tools, RHI
  - Blueprint and User interactions
- Advanced Rigging
  - Rigging in Maya, Python and MEL
  - Auto-Rigging and skinning with Python
  - Organic, Mechanical, and Camera Rigs
  - Biped, Quadrupeds and Face Rigs
- Modeling and Motion Strategies
  - Maya, ZBrush, Mudbox, Substance
  - Inorganic Hard Surface models
  - Organic Sculpts
  - Texturing, UVs, Photoscans
- Math of Graphical Simulation (Linear Algebra)
  - Octave and VPython
  - Matrix Transformations and Rotations
  - Orthogonal Projections, Vector Math
  - Mathematical Modeling of Physics
- Data Structures and Algorithms
  - C++, OpenGL, SFML, Box2D, Shaders
  - Unit Testing, DLLs, Libs, Git
  - Multi-Threading, Installers, Templates
  - 3D Graphics, Shaders, Collisions and Transformations on the GPU
  - Implementation of A* in a maze