Brock Pittman

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EDUCATION

North Carolina State University, Raleigh, NC GPA: 3.454

- Bachelor's in Computer Science - May 2025
- Courses: Game Engine Foundations, Building Game AI, Foundations of Interactive Game Design, Software Engineering, Computer Graphics, C and Software Tools, Data Structures and Algorithms, Independent Study, Senior Design

EXPERIENCE

Game Engine Foundations:

- Modeled and assembled a game engine in C++ to be general enough for users to implement their own games
- Implemented networking for multiple clients to connect to a server
- Constructed a multithreaded game loop architecture to listen for client connections, disconnections, and to update the server as needed
- Implemented Functionality: Collision, Networking, Events, Scripting, Multithreading

Computer Graphics:

- Utilized the OpenGL and GLSL to learn the fundamentals of graphics programming and shaders
- Created a window with a 3D environment
- Allowed for the rotation, translation, and scaling of different aspects of the 3D environment

Independent Study:

- Created a multiplayer souls-like game
- Learned Unreal Engine 5's networking capabilities and how to use them

SKILLS

Programming Languages: C++, C, Java, Verse
Graphics Technologies: OpenGL, GLSL
Game Engines: Unreal Engine 4 & 5, UEFN, Godot 4.3, PuzzleScript
Tools: Maven, Eclipse, JUNIT, Jenkins, GitHub

PROJECTS

Game Engine:

- Learned and Utilized C++, SFML, ZMQ, and V8 scripting for the creation of the engine
- Utilized multithreading to listen to any number of client connections while the engine was running
- Developed an event system to handle lots of actions occurring at once
- Implemented scripting to assist in reducing future compile time

Graphics Project:

- Created a 3D environment using OpenGL and utilized GLSL for shading
- Allowed for a camera to navigate the 3D environment
- Ensured elements were not Z-fighting and were layered correctly

Ardenfell (Independent Study Project):

- Implemented networking to mimic a souls-like summoning system
- Replicated player actions, events, and animations across the network
- Utilized Unreal Engine's Gameplay Ability System to assist with network replication

WORK HISTORY

NCSU - *Computer Science Grader/Teaching Assistant*

- September 2024 - May 2025
- Classes: Game Engine Foundations and Foundations of Interactive Game Design
- Instructor: Dr. Alexander Card

NC State Dining: Fountain Dining Hall - *Student Assistant Manager*

- August 2021 - May 2025