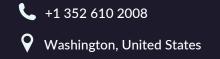
Jacy Scharlow M.S.

Software Developer





5+ Years of Experience Graphics API EDUCATION C/C++ Programming Multi-Displined

Python Programming Unreal Engine v.4 /5

Rensselaer Polytechnic Institute

Troy, NY

M.S. Computer Science (Concentration. Robotics/Vision/Graphics)

May 2023

B.S. Computer Science | Dueled Game and Simulation Arts and Sciences

May 2022

RESEARCH

Maya Wrinkling Plugin

January 2022 – April 2023

- Constructed an efficient skinning method that generates wrinkles during a 60fps animation leveraging the C++ Maya API
- Wrote a detailed 30-page documentation for ease of use and extension by reviewing work parallel to the development
- Developed a robust tool by reducing errors through debugging and meticulously curating around 15-20 tests
- Communicated project status weekly to executives through engaging demonstrations for 50 weeks

Glass Rendering

January 2020 - April 20

- Explored glass rendering techniques to enhance the understanding of 30 people within a graphics engine
- Simulated light rendering (reflection, refraction, caustics, etc.) with generated 1080p images through raytracing
- Curated prior research, documentation, and careful derivations of linear algebra equations from the past 30 years
- Presented the research findings by authoring a well-documented 7-page paper and a PowerPoint presentation

RELEVANT EXPERIENCE

Trojan Duck Games Remote

Student Software Engineer

August 2021 - December 2021

- Managed code organization and modularity by reviewing 80% of all code and establishing a standard workflow
- Assisted in improving the JIRA workflow, which reduced repository errors by 70%, by working with the team lead
- Realized the studio vision by creatively overcoming limitations in the Unity Engine (C#) of 20+ levels
- Facilitated efficient cross-disciplinary communication through active engagement in 100% of remote meetings

Wiltune Troy, NY

Student Software Engineer

January 2020 - May 2020

- Designed a responsive enemy AI, leveraging the behavior tree of 30+ branches in Unreal 4 blueprints
- Built a testing level for the game mechanics that tested 100% code coverage using the UnrealBuildTool
- Spearheaded the initial 70% of the narrative design by pitching concepts through a short story and concept art
- Bolstered a culture of a driven and 5+ multi-disciplinary group that emphasized self-accountability

ACHIEVEMENTS AND EXTRACURRICULAR

Organizations: Member of The National Society of Leadership and Success (NSLS), RPI Women in Programming, NSLS, Varsity Track and Field, Art Club, Sole Survivors

Achievements: The Dean's Honor List, 4x Track & Field All American, RPI Olympia Freshman Athlete of the Year, Rensselaer Leadership Award, Hoby Leadership Award

SOFTWARE, SKILLS, AND OTHER

Software/OS: Windows, MacOS, Linux, Git (Perforce, JIRA), Adobe Creative Cloud, Microsoft Office, Excel, Unity Engine, Unreal Engine, MySQL, Maya, Blender, Pytorch, Substance Painter, OpenGL, Vulkan, CMake

Programming Languages: C++, C, C#, Python, Java, JavaScript, SQL, CSS, HTML, Assembly Languages, HLSL, GLSL

Skills and Knowledge: Data Structures, Algorithms, Machine Learning, Binary Exploitation, Artificial Intelligence, Databases, Computer Graphics, Computational Geometry, Game Development, Calculus, Multi-Variable Calculus, Linear Algebra, Binary