# Objective

To obtain a cooperative education or internship position with a focus in programming. Available immediately.

# Education

**Bachelor of Science in Game Design and Development** December 2018

Rochester Institute of Technology Rochester, NY

Presidential Scholarship, Dean’s List

# Experience

**GeoGame Design and Developer** May 2018 - August 2018

Rochester Institute of TechnologyRochester, NY

* Developed with CityEngine, Unity, Visual Studio, and C#.
* Conducted research between Mapbox and CityEngine for integrating real world geospatial data into construction of the setting, Dickinson, Texas in the aftermath of Hurricane Harvey.
* Modified Unity’s third person character controller to enable backwards movement, and implemented the camera transition between third person and first person map view.
* Programmed user interface for the map view and marker system.
* Programmed the goal manager for timed navigation objectives, with increasing difficulty of verbal instruction.
* Arranged objectives in the levels to follow the script, based on information from real events.
* Worked in an interdisciplinary team consisting of eight National Science Foundation (NSF) Research Experience for Undergraduate (REU) students and four GeoGame Design and Developers.

# Skills

**Programming Languages:** C#, C++, HTML, CSS, JavaScript **VCS:** Git

**Graphics APIs:** Direct3D 11 (with HLSL), OpenGL (with GLSL) **IDE:** Microsoft Visual Studio

**Game Engines:** Unity 5, Unreal Engine 4 **Other Tools:** Esri CityEngine

# Projects

**Ori Engine** November 2017 - February 2018

is a rendering engine and shader testing ground

* Created using Visual Studio, C++, Direct3D 11, and HLSL.
* Wrote shaders for deferred shading with normal buffer encoding and position reconstruction,

physically based rendering, screen space ambient occlusion, a particle system,

cascaded shadow mapping, soft shadowing, and post-processing:

bloom, eye adaptive exposure, and tone mapping for high dynamic range.

**PolyRunner** March 2016 - May 2016

is a procedural endless runner game for VR with an Oculus Rift

* Created using Unity, Visual Studio, C#, and Oculus SDK, in a team of four.
* Programmed player controls, ship shields, ship fuel drain and pickup, and tiling sand layers.

**The Adventures of Rob & Ots** October 2015 - December 2015

is a 2.5D online cooperative puzzle-platformer

* Created using Unity, Visual Studio, and C#, in a team of four.
* Programmed detached camera controls, ping communications, sprint effect, and character selection.