# Education

**Bachelor of Science in Game Design and Development** Expected 2018 Rochester Institute of Technology Rochester, NY

Presidential Scholarship

Dean’s List

# Relevant Coursework

Foundations of Game Graphics Programming AI for Game Environments

Data Structures and Algorithms for Games and Simulations Online Virtual Worlds and Simulations

College Physics, Analytical Geometry, Discrete Math 2D and 3D Animation and Asset Production

# Skills

**Programming Languages:** C++, C#, Java, HTML, CSS, JavaScript

**Game Engines:** Unreal Engine 4, Unity **VCS:** Git

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

**Graphics Programming:** Phong Shading and Blinn-Phong Reflection, Physically Based Rendering, Forward and Deferred Rendering, Texture Maps (normal, opacity), Cascaded Shadow Mapping, Particle Emitters, Post-Processing (bloom)

# Projects

**DirectX 11 Graphics Engine, as Graphics and Gameplay Programmer (team of 3)**

2.5D endless side scroller game, intended to show our graphics engine’s capabilities

* 3D graphics engine made in Visual Studio using C++, Direct3D 11, and HLSL
* Programmed shadow mapping, transparency, and collision responses
* Arranged and programmed the level environment

**The Adventures of Rob & Ots, as Network and Gameplay Programmer (team of 4)**

2.5D online cooperative puzzle-platformer

* Played by two, as miniature robots of different talents working together to solve puzzles
* Made in Unity using C#
* Programmed user interface, and networking such as a visual communication system and unique class selection

**PolyRunner, as Gameplay Programmer (team of 4)**

VR procedural endless runner game, intended for playing with an Oculus Rift

* Played as a damaged alien spaceship escaping across the desert near Area 51
* Made in Unity using C# and Oculus SDK
* Participated in level design and player control design
* Programmed player controls and procedural generation of obstacles

**Dolphin Flip, as Gameplay Programmer (team of 4)**

2D launcher, mobile game for Android phones or tablets

* Played as a dolphin with dreams of the stars and rocket fuel to spare
* Made in Unity using C#
* Participated in level design and arrangement
* Programmed player controls and randomized obstacle spawns