### Skills

Programming Languages	Libraries and Frameworks	Development Tools / Other
C# (7 yrs.) C++ (4 yrs.)	Vulkan Modern OpenGL (3.3+)	Visual Studio (2010 - 2015) Git
GLSL (Familiar) Python (Familiar)	Flask	Vim GNU/Linux

# Work Experience NVIDIA Linux Graphics Intern

May 2016 - August 2016

Worked on implementation Vulkan Direct to Display components of VK\_DISPLAY\_KHR.

### NVIDIA Linux Graphics Intern

May 2015 - August 2015

Worked on implementation of the next-gen Vulkan Graphics API.

#### MAGIC Research Fellow

March 2014 - Present

Worked on BlockyTalky. I implemented the Servo Motor Block and assisted in implementing an interface for remotely controlling the BlockyTalky through a webapp.

# Kids On Campus Instructor

July 2014 - August 2014

Worked with students from grades 9 - 12. Over the course of two weeks each session of campers learned how to use the Unity3D engine. The campers were taught how to create scripts for Unity in C#.

# Selected Projects Splattershmup - Lead Effects Programmer

Splattershmup is a Shoot 'Em Up game built in WebGL and Canvas. In Splattershmup the player leaves a trail of paint as they play, resulting in images that resemble Jackson Pollock's paintings. I designed and implemented the paint system. http://splattershmup.rit.edu.

### OfCourse - Contributor

Of Course is a course website framework that was written in Python using the Flask library. Of Course is currently being used in RIT's Humanitarian Free and Open Source Software Culture Course. I worked on the Participants page for OfCourse which scrapes students blogs for posts. OfCourse is part of the FOSS@MAGIC program which is sponsored by RedHat.

https://github.com/ryansb/ofcourse.

MINX is a C++ Game Development Framework. MINX makes it easier to create 2D games in C++ using an API that is similar to Microsoft's XNA Framework. MINX currently runs on Windows and Linux. I created the graphical backend for MINX and designed the API endpoints.

https://github.com/GearChicken/MINX

# OpenGL Water Demo

A demo written in C++ and OpenGL that renders water. The waves are based off of scrolling displacement map textures. The demo includes a photo of pebbles with refraction to better demonstrate the effect of the waves. The water in this demo is looks best when used as a background detail or with a minimal wave amplitude.

https://github.com/liam-middlebrook/opengl-water

# Education

Rochester Institute of Technology

August 2013 - Present

B.S. Game Design and Development, Minor in Free and Open Source Software

 $3.48~\mathrm{GPA}$ 

#### Activities

Sysadmin @ Computer Science House https://csh.rit.edu, Game Developers Conference 2016, Election Night Hackathon 2014, FOSS@MAGIC, Game Developers Conference 2015, Global Game Jam 2014, Homestretch Hackathon 2013 - 2014, Imagine Cup Hackathon 2013 - 2014, Local Hack Day 2014, National Civic Day of Hacking 2014, Software Freedom Day 2014