

# Zachary McIlwain

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Check out my website:

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## Education

### University of Nevada Reno:

B.S. Computer Science and Engineering : Minor in Math

*Graduation Date May 2019*

#### Skills

- Game engine creation from scratch.
- Shader Programming including advanced lighting models and shadow mapping.
- Object Oriented programming experience.
- Responsive website building
- Data Intensive computing with hadoop

#### Languages:

C++, C#, C, javascript, html and, CSS.

#### Development Tools:

Unity, Unreal Engine 4, Godot, Hadoop, Visual Studio,

#### Libraries:

OpenGL, BulletPhysics, Ogre

#### Modeling:

Blender, AutoCAD

## Projects

### 3D Donkey Kong

- Re-created the classic arcade Donkey Kong in a 3D environment with simulated physics.
- Worked with various C++ libraries including Opengl, Bullet Physics and imgui.
- Created other graphics simulations such as the solar system and a pinball game.

### AIMS

- Updated an outdated codebase in a broken state used for teleoperation of a robot in a simulated environment on the oculus rift.
- Adapted the code base to work with a Pioneer 3 robot with different sensors available.
- Dynamic level building from lidar data in a unreal engine 4 environment

## Work Experience

### AVMS A/V Technician | Reno, NV

*2017-present*

- Construct complex solutions to circumvent the limitations of providing professional A/V at a cost that a customer is acceptable with.

### A/V Link Tech at Microsoft | Reno, NV

*2016-2017*

- Ran daily checks on pre-installed A/V systems using signal flow to debug issues with the network or missing signal.
- Setup Personalized networks and troubleshoot internet connectivity problems.

### ASUN Sound and Lighting Sr. Technician / Lighting Director | Reno, NV

*2015-2017*

- Worked with a team to setup school events according to the customers needs.
- Held trainings on how to use lighting controllers and effectively program them for events.
- Researched