

# Benjamin Welsh

## Game Developer & Programmer

### Personal Info

#### Location

Westtown, PA

#### Phone

(610) 742-8624

#### E-mail

benjaminwelsh2@gmail.com

#### portfolio


www.benjaminwelsh.com

#### LinkedIn

<https://www.linkedin.com/in/benjamin-welsh-dev/>

### Skills

C/C++  Advanced

Python  Excellent

Java  Advanced

OpenGL/GLSL  Advanced

Blender  Advanced

UE4  Good

Unity  Some Experience

Small Group  Communication

Graphic Design  Advanced

### Featured Courses

Computer Networking

3D Game Dev & Tech

Computer Vision

Computer Graphics

Formal Languages and Compilers

Graphic Design I

Artificial Intelligence

### Interests

Team Fortress 2 Mapper

Competitive Team Fortress 2 Player

Portal 2 coop Speedrunner

Amateur Radio

Ballroom Dance

Naturally curious programmer and game developer with a passion for solving problems creatively and efficiently. Building a non-euclidean puzzle game using raytracing with Vulkan for my senior project. Built a game in 54kb for Ludum Dare 43.

### Education

Sep 2016 -  
May 2020

#### Ithaca College | Bachelors of Science in Computer Science

Minors in Graphic Design and Mathematics

3.8 GPA

### Employment

May 2018 -  
Oct 2018

#### Research programmer | Ithaca College - Summer Scholars program

- Processed raw enrollment data into several graph models
- Developed creative ways of analyzing and interpreting the data using Markovian systems and forced-directed layouts
- Wrote interactive web-based and Java-based visualization tools
- Presented work to the Ithaca College community at the IC Data Day

Sep 2017 -  
Dec 2017

#### Research Assistant | Ithaca College - Tots on Bots

- Assembled Arlo robot platform
- Wrote Propeller C firmware to control robot over serial
- Programmed a Raspberry Pi to control robot based on orientation sensor attached to baby

Jun 2017 -  
Aug 2017

#### Project Intern | Perfect Prototype

Perfect Prototype creates interactive experiences for museum and exhibit environments

- Focused on stability due to the long-term nature of museum exhibits
- Built a shader-based image manipulation component of an interactive museum exhibit created with Unity
- Developed interactive effects using LEDs, sensors, and Arduinos
- Performed QA and provided constructive feedback on ongoing projects

### Relevant Experience

Aug 2019 -  
present

#### Senior Project | Non-Euclidean Raytraced Puzzle Game

Build an engine using C/C++ to support non-euclidean environments

Simulate non-euclidean physics using the Bullet physics engine

Set up raytracing using Vulkan on an RTX card

Novel puzzle design in non-euclidean space

#### RGL.gg | Division Admin

RGL.gg is the premier NA Team Fortress 2 competitive league

Handled conflicts quickly and effectively

Participated in major decision-making discussions and processes

Authored rule documents and responses to sensitive situations

#### Ithaca College Game Development Club

Vice President Jan 2018 - Present

#### Game Jams

Participated in Global Game Jam in 2017 and 2018 and Ludum Dare 40 and 43

#### Published Content in Team Fortress 2

Designed, modeled, textured and rigged wearable medals for competitive leagues and tournaments that were added to the game

#### Independent Study with UE4

Created a C++ based portal system in Unreal Engine 4