

# Benjamin Welsh

Software Engineer & Game Developer

Naturally curious software engineer and game developer with a passion for solving problems creatively and efficiently. Worked on research modeling and visualizing Ithaca College's network of courses as part of the college's internal review of their general education program. Built a game in 54kb for Ludum Dare 43. Also studying Graphic Design and Mathematics.

## Personal Info

### Location

Westtown, PA

### Phone

(610) 742-8624

### E-mail

hello@benjaminwelsh.com

### portfolio

www.benjaminwelsh.com

### LinkedIn

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

## Skills

C/C++	<div><div style="width: 80%;"></div></div>	Advanced
Python	<div><div style="width: 100%;"></div></div>	Excellent
Java	<div><div style="width: 80%;"></div></div>	Advanced
OpenGL/GLSL	<div><div style="width: 60%;"></div></div>	Good
JavaScript	<div><div style="width: 60%;"></div></div>	Good
git	<div><div style="width: 80%;"></div></div>	Advanced
Small Group Communication	<div><div style="width: 100%;"></div></div>	Excellent
Graphic Design	<div><div style="width: 80%;"></div></div>	Advanced

## Featured Courses

Computer Networking  
Computer Vision  
Computer Graphics  
Formal Languages and Compilers  
Graphic Design I  
Artificial Intelligence

## Interests

Game Development  
Team Fortress 2 Mapping  
Data Visualization  
Amateur Radio

## Experience

Jul 2019 -  
Aug 2019

### MacOS IT Administration

*Open Connections*

Researched and orchestrated the deployment of a management system for the computers at a small private school

May 2018 -  
Oct 2018

### Research programmer

*Ithaca College - Summer Scholars program*

Responsibilities

- 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*

Responsibilities

- 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 reliability and stability due to the long-term nature of museum exhibits.
- Developed 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

## Education

Sep 2016 -  
present

### Ithaca College

- Bachelors of Science in Computer Science
- 3.8 GPA
- Graphic Design Minor
- Mathematics Minor
- Graduating Spring '20

## Additional Activities

### Non-Euclidean Game built with Raytacing using Vulkan and C++ (Senior Project)

Currently working on building a 3D puzzle game set in a non-euclidean environment. Using a technology stack of Vulkan raytracing running on an RTX card and a C++ engine.

### Ithaca College Game Development Club

*Vice President Jan 2018 - Present*

Active Member September 2016 - Present

### Game Jams

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