

Benjamin Graham

Carnegie Mellon Electrical and Computer Engineering

3 Experience

present

Undergraduate Research Assistant

Cylab Security and Privacy Institute

- · Working with Northrup Grumman for the development of visualization tools to detect and monitor the distribution of malicious software.
- Implemented a haptic interface for first responders that interfaces with virtual reality scenarios for the NIST haptic challenge. Currently, the entry has sucessfully completed the first four stages of the competition and is in second place overall.
- Developing a web application to graphically model the behavior of artifical intelligence algorithms.
- Contructed an augmented-reality headset for rescue workers to perform live indoor mapping in scenarios where visibility is compromised.

Summer 2018

CERT Security Automation Intern

Software Engineering Institute

• Used Python and Angular for web application development for simplified SiLK internet traffic analysis.

2015 2017

Software Intern

Carnegie Mellon Robotics Institute

- · Wrote software using Swift and Metal for displaying interactive 3D data on mobile devices under the supervision of Professor Simon Lucey.
- Wrote Python and Matlab code for use in a 3D image camera calibration system under the supervision of Professor Fernando De la Torre.
- Designed, 3D printed, and assembled a robot under the supervision of Professor Alonzo Kelly.

Personal Projects

Jan. present

Python Static Analysis Tool

 Developing a static type-analysis tool for Python to detect type errors and optimize function calls prior to runtime.

Mar 2019

Com-Unity Web Application

Created a inter-dorm request application for SteelHacks using Node.js.

Won Snapchat prize for best social media integration.

Nov. 2018

PyDoom Video Game

- Developed a 90's style first person video game inspired by the likes of Doom and Quake.
- Used a custom physics and OpenGL graphics engine.
- Won 1st prize overall at the 15-112 Project Showcase.

Oct. 2018

Blockyslice Video Game

- Lead programmer for a skill-based video game written for Hack112.
- Won 1st prize overall as well as nomination for "Most Fun".

2017 -2018

Voxel-based Render Engine

- Wrote a voxel-based graphics and physics engine for determining optimal buffer size and geometic meshing method.
- Won 1st place at PJAS, as well as the Directors award for Computer Science and the Duquesne Award for Computer Science.

2017

Kathode Android Game

- Released a rhythm-based video game on the Google Play Store.
- Developed using Java and Android Studio.



Education

2018 present

Carnegie Mellon University

- · Student in Electrical and Computer Engineering.
- Relevant courses include Introduction to Computer Systems, Structure and Design of Digital Systems, Functional Programming, Principals of Imperative Computation, Concepts of Mathematics, Fundamentals of Programming.



bwgraham@andrew.cmu.edu

Phone Number

412-265-5752

Website

bwgrah.am

LinkedIn

linkedin.com/in/benwilliamgraham

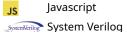
Github

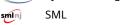
github.com/benwilliamgraham

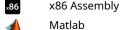


aliguages			
3	C		
3	C++		
3	Python		
_			

(,	Java







Libraries and Frameworks			
OpenGL	OpenGL		
ટુ	OpenCV		
(js)	Node.js		
)3	d3		
(AI)	Unreal Engine		

Angular		0 ca. 2gc	_
	A	Angular	

Platforms

○ ••		
	Windows	
#	Android	
Δ	HTC Vive	

Δ	HTC Vive
Ć	IOS

Linux

Software

	git	
2	Android Studio	
F	Fusion 360	

Haydayaya

пагич	vare	
&	Raspberry Pi	
∞	Arduino	

Altera Cyclone V