George Whitfield, Jr.

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Education

Carnegie Mellon University *2018 - 2022*

Sophomore in Electrical and Computer Engineering, Game Design Minor.

Woburn Memorial High School *2014 - 2018*

Work History

Summer Undergraduate Research Apprenticeship (SURA)
Cognitive Development Lab, Carnegie Mellon University
Advisors: Dr. Erik Thiessen, Cassondra Eng *Summer 2020*

Developed web-based app for education technology experiments with children. Deployed Unity project to web for remote data collection. Rebuilt personal website for lab supervisor with HTML, CSS, and JavaScript.

E Ink Corporation | Intern *Summer 2019*

Developed an image processing application in Python using PyQt and QtDesigner. Programmed Python libraries for interacting with a robotic arm, a camera, and Arduino via the image app.

MIT Bioinstrumentation Lab | Intern *Summer 2017*

Developed unit tests and front-end code in JavaScript for MICA, an educational project involving sensors used in classrooms.

Relevant Course Work

Introduction to Computer Systems 18-213 *Spring 2020*

Taught in C, this course is designed for students to become more effective programmers regarding performance and code portability. Topics covered: machine-level code, performance evaluation and optimization, computer arithmetic, memory organization and management, networking technology and protocols, and supporting concurrent computation.

Mathematical Foundations of Electrical Engineering 18-202. *Spring 2020*

Topics covered: Complex Analysis, Vector and Matrix Calculus, Linear Algebra, Vector Spaces, Linear Independence, Scalar Products, Eigenvalues and Eigenvectors, Linear Transforms, Differential Equations.

Projects

“Slender” Remake – Horror Video Game *Summer 2019*

During the summer of 2019 I remade the horror video game Slender using Unity. I programmed the game logic, audio management and a user interface. I worked on the game full-time for three weeks, and then a few tweaks were added later. I also wrote the music.

BEATDOWN – Python-based Music Video Game *Fall 2018*

For my final project in 15-112 Fundamentals of Programming, I created BEATDOWN, which is a game that generates beat and frequency dependent obstacles that the player must dodge. I taught myself about Fourier transforms and wrote my own audio signal processing library without using an FFT library within the three-week duration of the project assignment.

Skills

Python, C, C#, JavaScript, HTML, CSS, Git, Unity, Blender, Spanish [advanced], Japanese [advanced]