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EDUCATION

Carnegie Mellon University 2018 - 2022

Major: Electrical and Computer Engineering. Minor: Game Design.

Relevant Course Work: Computer Graphics, Introduction to Computer Systems, Principles of Imperative Computation, Fundamentals of Programming, Physics II for Engineering Students, Mathematical Foundations of Electrical Engineering, Signals and Systems, Electronic Devices and Analog Circuits

SKILLS

Python, C, C++, C#, Unity, JavaScript, HTML, CSS, PyQt, Git, Blender, Spanish [B2], Japanese [B1]

WORK HISTORY

Upwork Freelancer | PyQt Development August 2020

Created additional editor window and tools for client's National Football League analysis application in Python. Discussed feature goals and iterated to match client's specifications.

FindOurView | Full Stack Developer Intern August 2020

Developed full-stack web app features in Django/Python/HTML/CSS/JS at MIT startup company.

Carnegie Mellon University Cognitive Development Lab | Research Apprenticeship June - July 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.

PROJECTS

Path Tracer Fall 2020

Developed code for ray generation, ray-triangle intersection, shadow ray creation, path tracing with Russian Roulette termination, mirror and glass shader with Fresnel, and environmental lighting in C++.

SVG Rasterizer Fall 2020

Developed SVG rasterization pipeline in C++ with trilinear filtering and alpha compositing.

HTTP Proxy Server Spring 2020

Wrote web request parsing and socket management routines for Linux in C.

Malloc Implementation Spring 2020

Developed custom segmented list malloc implementation in C.

Space Tanks | United Game Jam Entry | Unity June 2020

Implemented a turn based 2 player shooter game in C# where players control tanks on the moon. Created within 48 hours for game jam contest. [Code sample](#)

Static | Bit Bridge Halloween Game Jam Entry | Unity October 2020

Wrote monster pursuit and gameplay flow code in C#. Worked closely with fellow team members to meet a tight one-week deadline. [Code sample](#)

HOBBIES Music Composition, Jazz Piano, Crochet, Origami, Cooking