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in jacksoncampolattaro

🌐 JacksonCampolattaro

Jackson Campolattaro

Self-motivated Computer Engineering student with programming experience and an enthusiasm for Open Source principles. I use complex, long-term personal projects as a medium for exploration of new programming languages, tools, and techniques.

Education

Virginia Polytechnic, Computer Engineering.

Graduation Spring 2021

Pursuing a major in Computer Engineering with a minor and specialization in Computer Science. 117 Credit Hours Earned. Expected to graduate 1 year early due to accelerated classes.

Skills

Languages

C++.

6 Years Experience

Libraries: Catch2, libsigc++, OpenMP, Intel TBB, Posix Threads, Gtkmm, Qt, OpenGL, GLFW, Magnum, CLI11, spdlog, Cereal, TOML11, Libsoundio, FFTW

C.

2 Years Experience

Libraries: Jansson, LibJWT

Python.

2 Years Experience

Libraries: OpenCV

Others.

In Order of Experience

Java, Rust, Verilog, HTML + CSS / Sass, Octave / Matlab, LabView, MIPS Assembly, x86 Assembly

Tools

Git

GDB

Github Actions

Markdown

Linux

Perf

Ansible

L^AT_EX

Valgrind

Travis CI

Doxygen

Experience

Employment

Google Summer of Code Apprentice, CGAL.

May 2020–Present

Working remotely with a mentor in France to develop a new software package. The project is an Octree data structure, used in other packages. Required a mix of working with legacy code and creating entirely new code.

Innovation Committee Member, Telos Corporation.

June 2019–August 2019

Worked in a 7 person group of interns researching the viability of future software security products. Built the frontend of a replacement for Telos' employee intranet solution.

Projects

Quarter ID, Python.

August 2020–Present

Leading a small team of interdisciplinary engineering students to develop a solution which determines the value of collectible coins using machine vision. Involves industrial imaging and lighting hardware, paired with bespoke software written in Python using OpenCV.

N-Body, C++.

July 2018–Present

Building a multi-threaded dynamical simulation tool to improve my familiarity with optimization, build tools, design patterns, and libraries. Incorporated concepts including concurrency, event-driven programming, serialization, cache-optimization, and tree algorithms among others.

Spectrogram, C++.

August 2020–December 2020

Developed a low-latency Spectrogram audio frequency visualizer alongside two other students. Involved navigating real-time limitations in a contemporary event-driven desktop application, as well as CI, build system engineering, and other team management logistics.