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Jackson Campolattaro

Self-motivated Computer Engineering student with programming experience and an enthusiasm for Open Source principles. I'm currently seeking a software-focused thesis position in the Netherlands, with intentions to stay after my graduation.

Education

TU Delft, *Computer Engineering*. **Fall 2021–Spring 2023**

Research-oriented masters in Computer Engineering, with a focus on software and software/hardware codesign.

Virginia Polytechnic, *Computer Engineering*. **Fall 2018–Spring 2021**

Major in Computer Engineering with a minor and specialization in Computer Science. Graduated 1 year early due to accelerated classes, GPA 3.64/4.00 in-major, 3.46/4.00 overall.

Skills

Languages

C++. **8 Years Experience**

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

C, Python, Java. **5 Years Experience**

Libraries: Jansson, LibJWT

Others. **In Order of Experience**

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

Tools

Git	GDB	Travis CI	Doxygen
Linux	Perf	Github Actions	Markdown
Valgrind	Tensorflow	Ansible	LaTeX

Experience

Employment

SIMD Research Internship, *Inria*. **May 2021–August 2021**

Worked alongside PhD students at Inria Research Center Sophia Antipolis to incorporate SIMD concepts into CGALs collision detection packages, improving performance.

Google Summer of Code Apprentice, *CGAL*. **May 2020–August 2020**

Worked 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 green-field development.

Innovation Committee Member, *Telos Corp*. **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–June 2021**

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

N-Body, *C++*. **July 2018–Present**

Independently 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.