

# Christopher Baillie Olin

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Bethesda, MD 20816

## Education

### University of Maryland

B.S., Mechanical Engineering and B.S., Computer Science

- President's Scholarship for Academic Achievement

College Park, MD

GPA: 3.98

Anticipated Dec. 2022

## Skills

**Languages:** Python, Java, Ruby, JavaScript, TypeScript, C, C++, OCaml, Racket, R, MATLAB

**Software:** SolidWorks, Autodesk Inventor, EES

## Experience

### Kroll Bond Rating Agency, Data Engineering Team

New York City, NY

Data Management Intern

June 2022 - present

- Modified a Flask API code generator to add authentication with Auth0 to generated APIs
- Created a user interface with Dash, allowing analysts to upload spreadsheets to run through a machine learning model and download results as another spreadsheet

### University of Maryland, Digital Signal Processing Computer Aided Design Group

College Park, MD

Undergraduate Research Assistant

Sept. - Dec. 2021

- Debugged and translated a digital signal processing software tool from Java to C++
- Applied pre-trained computer vision models to drone footage and characterized the models' accuracy

### Amazon, Prime Video Live Monitoring Team

Seattle, WA

Software Development Engineering Intern

June - Aug. 2021

- Built a video defect detector to monitor the quality of Amazon Prime Video live events in production
- Integrated the project with existing video monitoring tools built and maintained by other team members
- Demonstrated the impact of my project by presenting to managers of my team and adjacent teams

### Army Research Lab, E/H-Field Sensing Team

Adelphi, MD

Software Development Engineering Intern

June - Aug. 2020

- Engineered a Wide Area Network to securely connect a web of Internet of Things power sensors
- Designed a secure web portal with NodeJS to access multiple sensors' individual configurations and data
- Summarized and explained my work to a panel of scientists and researchers unfamiliar with my team's work

## Projects

### Personal Website

Ruby on Rails

- Developed a personal website to share information about myself, my projects, and my resume, with content populated dynamically from markdown files, allowing updates to the site's content without changing code
- Utilized Ruby on Rails to create the site and deployed it with AWS Lightsail (available at <https://olincb.me>)

### Wacket - Compilers Final Project

Racket, WebAssembly, JavaScript

- Co-created Wacket, a Lisp-inspired language with a compiler that targets WebAssembly, by writing a lexer, parser, compiler, abstract syntax tree, and pretty printer in Racket, and a runtime system in JavaScript
- Source code and write up are available at <https://github.com/stefanhts/wacket>

### Spotify Playlist Genre Analyzer - Data Science Final Project

Python

- Collected and visualized genre data about all songs in a Spotify playlist, using Spotify's API and matplotlib
- Analyzed the gathered data, with the goal of scoring a playlist based on the similarity of its songs' genres
- Displayed results of this study in a webpage (available at <https://olincb.github.io/spotify-playlist-analysis/>)

### Sound Discretizer - Mechatronics Design Project

Arduino

- Constructed and wired a device that listens to its environment and plays back the closest tune, discretized to notes in the A440 12-note scale, in a housing that included a microphone, analog noise filters, and aux. output
- Programmed the internal Arduino, utilizing a Fast Hartley Transform to detect musical pitches
- Recorded a short video to present my project virtually

## Interests

**Clubs:** Rock Climbing (member; former president, 2020), Ultimate Frisbee (member)

**Personal:** Mountain Biking, Road Cycling, Kayaking (former whitewater kayaking instructor, 2017-2019)