

Christopher Baillie Olin

chris.baillie.olin@gmail.com | (202) 256-5810

<https://olincb.me> | <https://github.com/olincb>

Bethesda, MD 20816

Education

University of Maryland

B.S. Computer Science, Magna Cum Laude

B.S. Mechanical Engineering, Magna Cum Laude

College Park, MD

GPA: 3.98

Dec. 2022

Skills

Languages: Python, Java, Ruby, C, C++, JavaScript, TypeScript, OCaml, Racket, WebAssembly, x86, MATLAB

Technologies: GitLab CI, Docker, Terraform, Helm, AWS, Flask, Ruby on Rails, Plotly Dash, Django, NodeJS

Experience

Kroll Bond Rating Agency, Data Engineering Team

New York City, NY

Data Engineering Intern

June - Aug. 2022

- Modified a Flask API code generator to add authentication with Auth0 to generated APIs
- Transitioned numerous outdated APIs to be dynamically generated, greatly reducing duplicated boilerplate code and allowing for updates to be applied to all APIs with a single code change, saving hours of manual work
- Managed continuous integration and infrastructure as code with GitLab CI, Docker, Terraform, and Helm

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 model accuracy, demonstrating a need to spend resources retraining models on more relevant imagery

Amazon, Prime Video Live Monitoring Team

Seattle, WA

Software Development Engineering Intern

June - Aug. 2021

- Built an autoscaling video defect detector with AWS infrastructure to monitor the quality of livestreams
- Integrated the project into an existing pipeline, in a large codebase of livestream maintenance tools
- Demonstrated the impact of my project to managers of my team and adjacent teams by presenting numbers of defects detected in production, highlighting the thousands of customers positively impacted by my work

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

Wacket Programming Language

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>

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>)

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 data with dimensionality reduction, with the goal of scoring the similarity of songs in a playlist
- 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