Christopher Baillie Olin

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Education

University of Maryland — **College Park, MD**
B.S., Computer Science and B.S., Mechanical Engineering — **GPA: 3.98**
- President's Scholarship for Academic Achievement — Dec. 2022

Skills

Languages: Python, Java, Ruby, JavaScript, TypeScript, C, C++, OCaml, Racket, WebAssembly, R, MATLAB
Technologies: GitLab CI, Docker, Terraform, Helm, AWS, Flask, Dash, Ruby on Rails, 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- Transitioned numerous outdated APIs to be dynamically generated, greatly reducing duplicated boilerplate code and allowing for updates to be applied to all APIs with a single code change
- Created a user interface with Dash, giving analysts access to a machine learning model via spreadsheets
- 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

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 live events
- 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

Interests

Clubs: Rock Climbing (member; former president, 2020), Ultimate Frisbee (member)
Personal: Mountain Biking, Road Cycling, Kayaking (former whitewater kayaking instructor, 2017-2019)