Orion Bloomfield

Software Engineer and Student Researcher

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Education

Brown University   Providence, RI
- *Bachelor of Science in Computer Science*   Sep. 2020 - May 2024
  Concurrent Masters of Science in Computer Science   **GPA**: 3.92/4
  - **Related Coursework**: Accelerated Intro to CS, Deep Learning, Software Engineering, Computational Molecular Bio., Accelerating Chemical Discovery, Recent Applications of Probability and Statistics, Honors Linear Algebra

Experience

Microsoft   Redmond, WA
- *Azure Data - Usage Billing Service*   June 2022 - August 2022
  Software Engineering Intern   Backend Service: **.NET, C#, Typescript**
  - Created a vscode extension utilizing language modeling to streamline on-boarding new customers to the billing service.
  - Implemented the Language Server Protocol to allow for code completion, errors, tooltips, etc. to be handled in the editor.

Brown University   Providence, RI
- *Rubenstein Theoretical Chemistry Group*   May 2022 - Present
  Research Assistant   Full Stack: **Node.js, Express.js, JavaScript, React**
  - Building a webapp to host and support queries to a curated dataset of protein-peptide interaction pairs
  - Implementing interactive viewers for 3D structure, sequence, and markov model dynamics data.

Care New England   Providence, RI
- *Dr. Uzun's Genomics and Machine Intelligence Lab*   August 2021 - June 2022
  Research Assistant   Full Stack: **Java, SQL, Typescript, JavaScript, React**
  - Built an interactive web application that generates multi-layer graph networks from protein-protein interaction data with various analytic frameworks - *proteinarium.brown.edu*
  - Implemented batch server-side analysis optimizations which save research scientists in the PPI field hours of computation.
  - Innovated on the backend analytics framework, used by hundreds of researchers.

Ladd Observatory   Providence, RI
- *Observatory Assistant and Telescope Operator*   August 2021 - Present
  - Lead group observatory viewing sessions, operating multiple sets of telescope equipment.

Frutor LLC   Montgomery, NJ
- *Online Tutor*   July 2020 - Present
  - Tutoring high school level Biology, Chemistry, Computer Science, general test-prep, and college essay writing

Stanford University School of Medicine   Stanford, CA
- *Dr. Seung Kim's Developmental Biology Lab*   July 2019 - August 2019
  Summer Research Intern   Lab Skills: **DNA Prep, PCR, iPCR, IHC, BLAST, Fly Dissection**
  - Created software to aid in the systematic analysis of PCR reads and expression data.
  - Taught rotating high school biology teachers the basics of fly pushing and how to adopt it in a classroom setting.

Projects

CounterPointer *Spring 2021* - Classical counterpoint checker and generator service for music theory students. Frontend Lead.
  Full Stack: **Java, Typescript, JavaScript, React**

peaCTF *Summer 2019, 2020* - Founded capture-the-flag style web competition for aspiring cybersecurity students. Over 2,000 unique high school participants across the globe. Designed the website. Led problem-writing team.
  Full Stack: **C, MongoDB, Python, Flask, React**

BrunoCoin *Summer 2021* - Stencil code for fully-functional Bitcoin-like token, BrunoCoin.
  Language Used: **Golang**

Leadership

Brown Puzzle Club - *Founder* *August 2021 - Present* - Organize meetings and events, leading discussions on self-made or curated online word and logic puzzles. Coordinate team writing puzzles for upcoming "Brown Puzzle Hunt." Lead meetings and collaboration of executive team. Lead website and puzzle platform development.

Pensos Summer Academy - *Technology Lead, Instructor* *June 2021 - September 2021* - Provided free summer classes for over 100 students from NYC during the pandemic. One of 13 semifinalists in NYU's 2021-22 Entrepreneurs Challenge cohort.

The Higher Keys - *Business Manager* *August 2021 - Present* - Brown's oldest all-gender acapella group. Coordinate and plan local gigs with student activities, other groups, and campus safety, as well as touring gigs with the venues associated. Handle funds and reimbursements. Maintain the website.

Skills

Languages and Technology: Java, C#, Javascript, Typescript, Python, React, Node.js, Golang, C++, Machine Learning, Tensorflow, Numpy, SQL, Docker, Git, Decentralized Networks, DeFi, Cryptography, Cybersecurity, Unit Testing
Scientific: Proteomics, PCR and iPCR Protocols, IHC Staining and Spectroscopy, BLAST Analysis, Gel Electrophoresis
Design: Figma, LaTeX, Adobe Photoshop, Adobe Premiere, Adobe InDesign
Miscellaneous: Puzzle Competitons, Teaching and Tutoring, Choral Signing