Olivia Brown

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EDUCATION

Oberlin College, Oberlin, OH — May 2025
B.S. Computer Science — *3.8/4.0*
Courses: Applied Machine Learning, Systems Programming, Computer Architecture, Computer Networks, Data Structures & Algorithms, Discrete Math, Linear Algebra

SKILLS

Programming Languages: Python, Java, R, JavaScript/TypeScript
Framework / Tools: React, HTML/CSS, Pandas, Matplotlib, NumPy, Unix, zsh, Quartz, Git/Github, Bootstrap, Material-UI

EXPERIENCE

Software Engineer Intern, Bank of America, *Chicago, IL* — *June 2024 - August 2024*
- Utilized **Python** and **Quartz**-based tools to expand automated job run functionalities for teams of 100+ employees, streamlining job processes across trading and risk management applications, allowing for greater flexibility and efficiency in scheduling, execution, and monitoring of automated tasks.
- Designed an API actively used by 1000+ employees to enhance Webex meeting recordings by leveraging **Python**, **noisereduce**, and **pedalboard** to develop customized end-to-end solutions with functionalities to clean audio, generate transcripts, and add closed captioning with an interactive UI component.
- Developed shell scripts for automated testing across 10 databases, improving reliability and efficiency for over 100 employees and accelerating issue identification through streamlined testing workflows.
- Successfully established and maintained development stacks with **Python** for a 40-person backend team, ensuring daily checks and updates to optimize performance, streamline workflows, and enhance collaboration, contributing to more efficient project delivery and robust application support.

Software Development Intern, Home Depot, *Atlanta, GA* — *May 2023 - July 2023*
- Developed an interactive dashboard for Home Depot's Orange Method, facilitating efficient project management for 200+ users. Utilized **React**, **MaterialUI**, **HTML/CSS**, and **Typescript** to create a dynamic and responsive UI/UX, while integrating **Node.js** to streamline real-time data synchronization for 50+ users with the **Precipio** platform.
- Enhanced managerial oversight by designing comprehensive data visualization and analytics tools within the dashboard, facilitating in-depth trend analysis and strategic decision-making across Home Depot.
- Implemented user authentication and role-based access controls within the dashboard, ensuring secure data handling and personalized user experiences while enhancing compliance with organizational data governance policies.

PROJECTS

Peer-to-Peer (P2P) Decentralized Network Project, Oberlin College, *Oberlin, OH* — *Dec 2023 – May 2024*
- Selected to participate in a team of four students, directed by industry expert Matt Zimmer (ex-Netflix Engineering manager), to develop a **decentralized peer-to-peer (P2P) networking** system for artwork generation and commerce across multiple servers with working frontend and backend functionality.
- Utilized **Python** and **Kademlia** database to implement robust security measures across modules, leveraging cryptographic hashing and secure key management protocols to ensure data integrity, confidentiality, and resilience, showcasing expertise in cybersecurity best practices and proactive threat mitigation.
- Leveraged **blockchain** technology and decentralized storage solutions to enhance the security and transparency of transactions within the P2P networking system, ensuring trust among users and facilitating seamless artwork commerce.

EXTRACURRICULAR ACTIVITIES

Computer Laboratory Assistant / Peer Tutor, Oberlin College, *Oberlin, OH* — *Feb 2023 – Feb 2024*
- Led engaging workshops on **Java** and **Python**, significantly enhancing student programming skills.
- Mentored over 100 students individually, contributing to a notable increase in class pass rates.

Research Assistant, Oberlin College, *Oberlin, OH* — *January 2023 - May 2023*
- Utilized **R** and **Python** for comprehensive analysis of error rates in machine learning models predicting COVID-19 cases and deaths, enhancing accuracy through collaboration with team members.
- Implemented **data visualization** techniques in R Shiny App to create dynamic graphs and geospatial maps, elucidating COVID-19 trends and facilitating stakeholder comprehension.

Vice President, Girls Who Code College Loops, *Oberlin, OH* — *Dec 2022 – current*
- Organize and host 150+ attendee ice cream socials and gatherings to promote interest in computer science and technology among women and nonbinary students.
- Lead weekly sessions on mastering data structures and algorithms with Leetcode problems, fostering a collaborative environment for immersive learning and skill development.

Musician, Oberlin College, *Oberlin, OH* — *Fall 2021 – current*
- Regularly perform for crowds of 200+ people at various venues, showcasing musical talent and captivating audiences.
- Release original music and collaborate with artists to produce diverse and innovative tracks under *Olivia Brown* on all platforms with 2000+ listeners.