

EDUCATION

- **Duke University Pratt School of Engineering** Durham, NC
Computer Science and Electrical/Computer Engineering *Expected May 2026*
 - **Relevant Courses:** Data Structures & Algorithms, Database Systems, Computer Architecture, Signals & Systems, Differential Equations, Multivariable Calculus, Linear Algebra, Engineering Design & Deliver.
 - **Atlas Fellow:** Global talent search with 1.5% acceptance rate, \$50,000 scholarship, and 11-day fully-funded program. Explored rationalism and Effective Altruism in tech development for the safety of future generations.
 - **Activities:** TA for Engineering Design and Deliver; The Cube (Entrepreneurial Living Group); Freshman Orientation Leader (Project Edge); Student Founder Program; Arete Fellowship (Activism in Effective Altruism).

EXPERIENCE

- **Software Engineering Intern @ Hotplate** San Francisco, CA
Built data pipeline for training market intelligence models at Y Combinator-backed startup *May. 2023 - Present*
 - **Data Pipeline:** Developed multithreaded Python scripts to efficiently query Instagram API and webscrape hidden Instagram account using Selenium. Preprocessed scraped data to be used as a training dataset for ML model.
 - **Infrastructure:** Designed and built PostgreSQL schema to componentize pipeline, cache data, and minimize query costs. Containerized pipeline with Docker and deployed program on Google Cloud Compute Engine.
 - **Results:** Integrated dataset with a grading server to identify 1000+ high-potential clients at 30% of expected cost. Worked directly with CEO + CTO to discuss market strategy, outreach methods, and wireframe data pipeline.
- **Engineering Extern @ Cisco** New York, NY
Interacted with Cisco technology and shadowed employees in Cybersecurity, IoT, and Hardware Design *Jul. 2022*
 - **Capstone Project:** Won 2nd place out of 10 teams that pitched a solution to improve transportation and the connected rail system with Cisco hardware and software. Examined Cisco's impact on other partnered companies.

PROJECTS

- **BlueRide: Rideshare Matching** Durham, NC
Skills: Swift, NodeJS, Express, MongoDB *Oct. 2023 - Present*
 - Developing a Swift-based iOS app that matches Duke students to find rides to/from the RDU airport. Implements student account authentication and a greedy matching algorithm for effective pairing. Backend is built with NodeJS/Express and MongoDB. Expected to handle 1000+ rides this academic year. Associated with HackDuke.
- **WalletWatchers: Expense Aggregator** Durham, NC
Skills: NextJS, SQLite, Plaid API, Python *Oct. 2023 - Dec. 2023*
 - Built full-stack web app to aggregate user expenses across bank accounts to generate insights on spending habits. Created API endpoints, queried Plaid API to securely fetch bank data, and used SQLite to store user data.
 - Designed schema with E-R diagrams and developed testing datasets in Python using Faker to test app functionality. Served as the project leader, outlining goals, delegating team responsibilities, and hosting project check-ins.
- **PoiVision: Prop Tracking & Feedback** New York, NY
Skills: Python, Computer Vision, Matplotlib, Data Processing *Jul. 2023 - Sep. 2023*
 - Developed a custom-trained YOLOv5 model that tracks the location of a juggling prop with a mAP of 0.83. Built a system that recognizes, categorizes, and models user-specific movements through regression analysis on parametrics, enabled by gradient descent. Feedback on improving movement accuracy is given through visual guides.
- **Quarcade (Google Mentorship Project)** New York, NY
Skills: MongoDB, Express, ReactJS, NodeJS; Websockets (Socket.IO), Figma *Jan. 2021 - Jul. 2021*
 - Built a MERN-based online game platform that supports real-time interactions between users. User data is stored in MongoDB and Websockets are used to communicate between users. Website wireframe developed in Figma.
 - Led project design brainstorm, managed project task assignment, and presented project to Google employees.

TECHNICAL SKILLS & INTERESTS

- **Technical Skills:** USACO Gold, Python, Java, C, NextJS, Tailwind, NodeJS, SQL, Firebase, MongoDB, Figma
- **Interests:** Visual Arts (Fire) Performer, Rock Climbing, Backpacks, IoT Devices, Entrepreneurship, Effective Altruism