

## EDUCATION

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- **Duke University Pratt School of Engineering** Durham, NC  
*Electrical/Computer Engineering and Computer Science* *Expected May 2026*
  - **Relevant Courses:** Data Structures & Algorithms, Database Design, Computer Architecture, Signals & Systems, Multivariable Calculus, Linear Algebra, Engineering Design and Communication, Intro to Electric Circuits.
  - **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

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- **Software Engineering Intern @ Hotplate** San Francisco, CA  
*Built data pipeline for training market intelligence models at Series A startup* *May. 2023 - Sep. 2023*
  - **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.
  - **Market Intelligence:** Integrated dataset with a grading server to identify 1000+ high potential clients. Worked directly with CEO + CTO to discuss market strategy, brainstorm 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.
- **Atlas Entrepreneurship Fellow** Berkeley, CA  
*Explored rationalism and Effective Altruism in tech development for the safety of future generations* *Aug. 2022*
  - **Awards:** Global talent search with 1.5% acceptance rate, \$50,000 scholarship, and 11-day fully-funded program.

## PROJECTS

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- **PoiVision: Prop Tracking & Feedback** New York, NY  
*Skills: Python, Computer Vision, Matplotlib* *Jul. 2023 - Present*
  - 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.
- **Library Book Drop Notification System** Durham, NC  
*Skills: Arduino & Micropython; ESP 8266/Raspberry Pi; Firebase; ReactJS; Tailwind* *Sep. 2022 - May 2023*
  - Developed software in Arduino and Micropython to allow multiple remote ESP8266/Raspberry Pis to detect the capacity of book deposit systems in Duke libraries. Developed React-based web interface for librarians to track the history of book deposits and adjust threshold parameters for the device. Data is stored in Firebase.
  - Expected to reduce retrieval trips by 80% and save Duke librarians 2 hrs/wk. Rated to handle 25,000+ books annually. Followed rapid prototyping timeline and routinely communicated with clients to meet design criteria.
- **HackDuke Fullstack Engineer** Durham, NC  
*Skills: ReactJS; Tailwind; NodeJS; Express; MongoDB* *Jan. 2023 - Present*
  - Developing a React-based website for HackDuke 2023. Responsible for codebase refactorization and tasked to create custom sign-up page that integrates with MongoDB to manage participant signup. (<https://hackduke.org/>)
- **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

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- **Technical Skills:** USACO Gold, Python, Java, React, Tailwind, NodeJS, MongoDB, C — Arduino, Figma, Fusion 360
- **Interests:** Visual Arts (Fire) Performer, Rock Climbing, Backpacks, IoT Devices, Entrepreneurship, Effective Altruism