

# Trevor Zou

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## SKILLS

**Languages** - JavaScript, HTML, CSS, Python, Mongo, JSON, Matlab, C, Go, SQL | **Database** - PostgreSQL, MongoDB | **Libraries & Frameworks** - Express.js, React, Django, JQuery, Bootstrap Vue | **Other** - RESTful Routing, API, GitHub, Latex, AWS, Docker

## EXPERIENCE

**Intern, Reach4Help** Remote | Nashville, TN

**May 2021 - Aug 2021**

- Data Science and Development for nonprofit democratizing access to volunteer help worldwide through accessible online mutual-aid programs
- Parsed User-Submitted Data for input into Oxygen/Vaccine resource map, cleaned and synced data across web-storage platforms
- Web-scraped and analyzed Twitter social media trends using NLP to create real-time location-specific crisis and resource demand maps

**Project Manager, Olin Public Interest Technology Project Team** | Needham, MA

**Aug 2022 - Present**

- Leader of an organization at school focusing on the practical application of engineering skills for social good
- Organize and run team meetings, plan and scope collaborative projects with nonprofits, manage budget

## PROJECTS

**Automated Hydroponics System** | Go, Python, FastAPI, AWS, Git, React, Docker

- Implement cloud-based automated hydroponics cart and wall using microcontrollers, containerized and deployed to ECS
- Developed custom API for Backend, Full interactive monitoring Web App using React, and sensor/actuator control using Arduino and Raspberry Pi
- Practiced Software Engineering best practices through CI/CD using automated unit testing/linting/formatting, detailed documentation, and establishing team culture and values

**EPA Notebook** | Python, Numpy, Pandas

- Led a team of students from Olin Public Interest Tech to develop a Python notebook exposing race-based data gaps in the EPA's Enforcement and Compliance History Online database using external API calls for database querying and Pandas for data processing
- Co-Designed with environmental policy non-profit EDGI, final work published by ProPublica and New York Times journalists.

**Spotlight** | React, MongoDB/Mongoose, AWS, Express

- Worked on a team of 3 to make social media app mockup allowing users to “Spotlight” personal stories and events with comment, feed, and like functionality
- Managed collaborative Git workflow with a three-person team using SCRUM framework
- Built API with multiple CRUD operations, image storage using AWS S3 Buckets, and Chakra UI and React for front-end

**Grad** | Javascript, Express, MongoDB/Mongoose, Liquid

- Designed a tool for keeping track of graduation requirements (general and major-specific) for my college, with an up-to-date maintainable course catalog
- 2 complete create, read, update, delete (CRUD) operations, 3 models, authentication, and seeded class/major data
- Created application with utility-first approach with simple tables for requirements, calendar for schedule, and grid for catalog using Express views with Liquid templating and bootstrap

**Machine Learning Disease Identifier** | Python, Numpy, Pandas

- Created Convolutional Neural Network in Pytorch to detect diseases in bean crops based on images of their leaves
- Up to 85% accuracy on a diverse training set of images taken from a smartphone

## EDUCATION

**General Assembly** | Remote

*Software Engineering Immersive*

**June 2022 - September 2022**

Full-stack software engineering immersive student in an intensive, 24-week, 450+ hour program focused on product development fundamentals, object-oriented programming, MVC frameworks, data modeling, and team collaboration strategies. Developed a portfolio of individual and group projects.

**Olin College** | Needham, MA

*Bachelor of Science in Engineering with Computing*

**August 2020 - May 2024**

*Cumulative GPA: 3.89/4.00*

- Recipient of 50% tuition merit scholarship