

Trevor Zou

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SKILLS

Languages - JavaScript, HTML, CSS, Python, Mongo, JSON, Matlab, C, Go, SQL | **Database** - PostgreSQL, MongoDB |

Libraries and Frameworks - Express.js, Django, JQuery, Bootstrap | **Other** - RESTful Routing, API, GitHub, Latex, AWS, Docker

PROJECTS

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

- 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

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 for front-end styling

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

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
- Co-Designed with environmental policy non-profit EDGI, pitched final work to ProPublica and New York Times journalists.
- Used API calls for database querying, Pandas for data processing
- Packaged into accessible open-source Google Colab with easy-to-digest format/curated additional resources

Machine Learning Disease Identifier | Python

- 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

EXPERIENCE

Volunteer, Data Science Team, Reach4Help | Canada

Feb 2021 - Dec 2021

- Data Science and Development for nonprofits 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
- Current project is a collaborative project with a nonprofit designing a game to create a welcoming and affirming community for LGBTQ+ youth
- Organize and run meetings, implement the game in C+/Unity, conduct user research and evaluate stakeholder needs as part of game design

Olin Public Interest Tech Fellowship, Remote | Nashville, TN

May 2021 - August 2021

- Fellowship allows students to work at public interest organizations and advance Olin's mission to do work for the good of the world.

- Worked with an organization developing solutions to effectively deliver medical supplies over long distances to those with accessibility issues.
- Configured custom prototype of VTOL drone design for flight simulation/autonomous flight in a flight simulator using 3dsMax, RealFlight, and ArduPilot

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