Zhiyang Zuo

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EDUCATION

University of Massachusetts Amherst (GPA: 4.0) Amherst, MA
Candidate for Bachelor of Science in Computer Science, Minor in Mathematics *Expected Graduation: May 2024*
Courses: Introduction to Algorithms, Operating Systems, Search Engines, Artificial Intelligence, Computer Networks, Make: Physical Computing, Programming Methodologies, Computer Systems Principles, Reasoning Under Uncertainty, Introduction to Computation

Bunker Hill Community College – Dual Enrollment Boston, MA
Courses: Data Structures, Advanced Java Programming September 2019 – May 2020

PERSONAL PROJECTS

Personal Website (https://zzuo123.github.io/) *January 2021 – Ongoing Project*
- Programmed a static website using JavaScript, HTML, SASS to showcase personal projects and experiences.
- Utilized JavaScript libraries such as swiper.js to deliver a smooth user experience.
- Improved my UI design skill by learning and using the Figma software to design the website.

Daily App (https://daily-app-twd.herokuapp.com/home) *December 2020 - January 2021*
- Created a Python Flask web app and deployed it on Heroku to help users keep diaries and track weather and time.
- Utilized the Open Weather Map API and python request module to retrieve accurate weather data based on zip code.
- Designed and implemented a data model to store and query user data efficiently on a remote PostgreSQL database.
- Implemented email-based authentication and password hashing and salting to ensure user account security.
- Utilized the Bootstrap framework and CSS media queries to make the website interactive and mobile responsive.

WORK EXPERIENCES

Manning College of Information and Computer Sciences Amherst, MA
Undergraduate Course Assistant, CS377 Operating Systems *September 2022 – Present*
- Hosted semiweekly office hours where I answered students' questions about course materials and assignments.
- Assisted in hybrid teaching by relaying zoom chat to the professor during lectures and answering questions online.
- Collaborated with 8 other UCAs to grade 150+ students' assignments and labs within 1 week from the deadline.

Stoke Therapeutics Bedford, MA
Bioinformatics Summer Intern, Platform Discovery Group *June 2022 – August 2022*
- Collaborated with a team of 3 scientists to implement a High-Throughput RNA-Seq QC pipeline using AWS, Docker, and Snakemake to automate the processing of sequencing data in the TB scale and generating of dynamic visual reports.
- Performed tests to assess the efficiency of popular RNA-Seq QC tools and developed a python script to automatically configure AWS cloud computing resources for the pipeline based on input size to minimize cost and maximize efficiency.
- Participated in weekly team meetings to report progress, discuss roadblocks and solutions, and give and receive feedback.

Biogen Cambridge, MA
Summer Intern, Technical Product Complaint Department *June 2021 - August 2021*
- Designed and implemented a product defect knowledge wiki on Confluence with a global team of SMEs that improved team efficiency by 15% and enabled the department to retain key knowledge essential for team functioning.
- Created a Python program to extract common wordings from 10k+ customer complaints for new-hire training.
- Automated an excel index match process using Python and the Pandas library to standardize data processing and reduced the time required to generate the monthly report by 1 hour.

Malden YMCA Malden, MA
Zero-Robotics Program Instructor *June 2019 – July 2019*
- Co-taught programming and physics lessons to 30+ elementary school students and prepared them for the Zero Robotics state competition at MIT in which they placed 2nd and 3rd.
- Oversaw 2 hands-on projects and 1 field trip to ensure students' safety and facilitate students' learning.

ACTIVITIES

Advent of Code (Global Annual Coding Challenge) Online Event
- Participated virtually in daily coding challenges to improve competitive programming skills *December 2020&2021*
- Ranked top 15% in the UMass Amherst student leaderboard

SKILLS

Programming languages: (proficient): Python, Java, C, JavaScript (familiar): C++, SQL, Rust, Snakemake, Nextflow
Frameworks: Node.js, PostgreSQL, Bootstrap, Flask, NLTK, Pandas, NumPy
Technology: Git, GitHub CLI, Ubuntu Linux, Docker, AWS, Heroku, Figma, Raspberry Pi