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 *September 2022 – May 2023*
- Hosted semiweekly office hours for CS377 to answer students' questions about course materials and assignments.
- Designed midterm exam problems for CICS256 to assess students' understanding in circuit concepts.
- Collaborated with other UCAs and TAs to grade students' assignments and labs within one week from submission.

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