Zejun Zhou

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EDUCATION

University of Wisconsin-Madison — Aug 2020 – May 2024
Bachelor of Science in Computer Science and Data Science
- Cumulative GPA: 3.698/4.0, Dean's List (Fall/Spring 2020-2021, Spring 2022, Spring 2023)
- Relevant Coursework: Big Data Systems, Operating Systems, Software Engineering, Data Structures and Algorithms
- Clubs: Data Science for Sustainable Development (DSSD), Google Developer Student Club (GDSC)

RESEARCH

Undergraduate Research Assistant — *Madison, WI*
The People and Robots Laboratory — Sep 2023 – Current
- Collaborated with Dr. Bilge Mutlu's group to simulate concurrent and asynchronous operations in robotic systems, and contributed to architecture design and state management control.
- Initiated the adoption of **Cassandra** for efficient data writing and secure storage, executing schema designs.
- Developed a responsive frontend application with **React,** utilizing the **Reactflow** library for interactive manipulation of nodes, arcs, and tokens, and integrated a **Flask** backend for processing simulation logic.
- Enabled full-stack containerization with **Docker** and implemented **Ngrok** services for live demonstrations, improving real-world applicability and collaboration with peers.

INTERNSHIPS

Software Engineer Intern – Esker Capstone Project — *Madison, WI*
Esker Inc — Sep 2023 – Current
- Developed key frontend features including file upload, validation, and logging using **React**, improving the user experience.
- Implemented essential backend features in **Flask** to meet the client requirements and support frontend file operations.
- Served as Scrum Master, facilitating sprint planning and standups, while leading the integration of **Docker**.

DevOps Engineer Intern — *Hang Zhou, China*
AsiaInfo Technologies Ltd — Jun 2023 – Aug 2023
- Engaged with the operations team to maintain and improve the Resource Monitoring Platform using **Docker** and **Kubernetes**, automating the deployment and scaling of services.
- Utilized **Jenkins** to deploy code from the company's Git repository to the testing environment, enabling continuous integration and automated testing processes.

PROJECTS

HealthHive (*Website*) (*GitHub*) — Jun 2023 – Sep 2023
A web application that's currently live, empowering individuals with personalized health insights and wellness forecasts.
- Engineered a dynamic and interactive frontend using **React.js** and orchestrated a robust **Flask** backend.
- Designed the **Cassandra** database schema for optimal data storage and high-speed retrieval, deployed the cluster to achieve ACID properties, enhancing the efficiency and reliability of the application.
- Leveraged **Spark** to extract and transform data from OLTP to OLAP, storing data in **HDFS** to create a scalable and reliable data warehouse.
- Deployed the application using **Google Cloud Platform** and Docker; configured **Nginx** as a reverse proxy to secure the APIs.

Sprint (*GitHub*) — Feb 2023 – May 2023
A DevOps platform designed to aid students in implementing agile methodologies.
- Engaged in UI/UX design and built interactive frontend features using **React.js**, integrated **Google Authentication** to enhance the user experience through aesthetic design and simplified authentication.
- Implemented **caching** and **local storage** strategies, substantially boosting the application performance, improving load times, and delivering a smoother user experience.
- Deployed **Docker** containers with React.js, Flask, Express, and MySQL to streamline development and ensure stable CI/CD workflows.

EXTRACURRICULAR ACTIVITIES

Peer Mentor — *Madison, WI*
Computer Science Learning Center of UW-Madison — Sep 2022 – May 2023
- Conducted weekly tutoring sessions, assisting over 50 students in understanding fundamentals of Computer Science.
- Provided guidance and support to students in **Python** and **Java** for their course projects, helping them navigate challenges and improve their understanding of the subject matter.

SKILLS

Programming Languages: Python (Proficient), Java, HTML/CSS, JavaScript, SQL, R
Frameworks: React.js (Proficient), Flask (Proficient), Node.js, Express.js, Bootstrap, Spark
Databases: Cassandra, MongoDB, MySQL, ArangoDB
Developer Tools: Git, Docker, Kubernetes, Hadoop, Kafka, Big Query
Certifications: Google Data Analytics Certification, The Complete 2023 Web Development Bootcamp