

JUN XIA

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Education

University of California, Irvine

Sep 2021 – Jun 2025

Bachelor of Science in Computer Science | GPA: 3.71

Irvine, CA

Relevant Coursework: Data Structure Implementation and Analysis, Database Management, Machine Learning and Data-Mining, Searching Systems, Human Computer Interaction, System Design, Test-driven Development

Honors: Dean's Honor List (6 quarters)

Sep 2021 - Jun 2024

Technical Skills

Programming Languages: Python, HTML, CSS, JavaScript, TypeScript, Java, Scala, SQL, C++

Frameworks/Libraries: Streamlit.py, React.js, Node.js, Angular.js, TensorFlow, PyTorch, Pandas, Numpy, Keras

Technologies: Git, CI/CD, Linux, REST API, Docker, Kubernetes, MySQL, MongoDB, WordPress, Google Cloud Platform Computing Service, AWS EC2

Experience

Software Developer

May 2024 – Present

Google Summer of Code

Remote

- Led the design and implementation of an interactive web interface for an open-source Python library Selector using **Streamlit**, enabling medical chemists with minimal programming experience to efficiently perform data analysis.
- Set up a **CI/CD** pipeline with **GitHub Actions** to automate the process of building **Docker** images and deploying them to DockerHub and **HuggingFace**, enabling thousands of external users to navigate chemical space with support for various file formats like SDF, SMILES, and InChi.
- Conducted comprehensive design and code reviews to align with organization best practices and architecture.

Teaching Assistant

Sep 2023 – Present

UCI Course, ICS 33: Intermediate Programming

Irvine, CA

- Mentored **150+** students in an intermediate **Python** course, offering targeted advice on improving their code.
- Initiated innovative teaching methods to assist students with advanced topics such as **Asymptotic Analysis**, **Databases**, and **Functional Programming**, resulting in **93%** of students passing with a C or higher.
- Analyzed student learning gaps via weekly labs, boosting the instructor's RateMyProfessor 5.0 ratings by **20%**.

Undergraduate Researcher

Jul 2023 – Sep 2023

Information Systems Group, UC Irvine

Irvine, CA

- Orchestrated the deployment of a **Flask** application using **Docker**, facilitating seamless integration with a **WordPress** website hosted on **Google Cloud Platform**.
- Engineered a responsive front-end feature leveraging **JavaScript** and **HTML**, enabling users to upload JSON-formatted data to a **RESTful API**.
- Optimized dynamic container orchestration, reducing server costs by **20%** and enabling instant API-driven workflows.

Projects

Fablix | Java, JavaScript, HTML, CSS

May 2024

- Developed a full-stack web application to facilitate online movie browsing and transactions, utilizing a **MySQL** database and **Apache Tomcat** server hosted on **AWS EC2**.
- Enhanced security through **HTTPS**, **reCAPTCHA** integration, and use of **PreparedStatement** to prevent SQL injections, ensuring robust data protection.
- Input **360,000+** movie information through **SAX XML parsing** and developed advanced search capabilities, including full-text search, autocomplete, and fuzzy search, improving search speed by **40%**.
- Set up **JDBC connection pooling**, and configured **load balancing** to distribute database load, increasing system availability by **50%**.
- Deployed the application in **Docker** containers and tested the deployment on AWS, ensuring seamless containerization and scalability.
- Configured and managed a **Kubernetes** cluster on AWS, setting up an automated **master-slave** MySQL configuration on **10** instances, reducing downtime during deployment by **80%**.
- Utilized **JMeter** to conduct performance testing on the Kubernetes cluster, measuring the system's throughput under different configurations, optimizing the application's responsiveness and scalability by **30%**.