JUN XIA

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Education

University of California, Irvine   **Sep 2021 – Jun 2025**

Bachelor of Science in Computer Science | GPA: 3.67   *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 (5 quarters)   **Sep 2021 - Mar 2024**

Technical Skills

Programming Languages: Python, HTML, CSS, JavaScript, TypeScript, Java, Scala, SQL, C++
Frameworks/Libraries: React.js, Express.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*

- Created 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.
- Deployed and maintained a web-based service on **Hugging Face**, enabling over **1.2 million** users to interactively navigate chemical space, which supports various file formats like SDF, SMILES, and InChi.
- Constructed and shared a **Docker** image for the Selector package, providing a robust tool for subset selection that is now freely available to the global research community, fostering open-source collaboration.

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 Student 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 features, for quick and accurate movie retrieval.
- Set up MySQL **master-slave** replication, applied JDBC **connection pooling**, and configured **load balancing** to distribute database load, ensuring high availability and reliability.

PulsePost | *TypeScript, JavaScript, HTML, CSS*   **Mar 2024**

- Crafted a dynamic **MEAN stack** web application facilitating user interactions through registration, login, and the ability to create, share, and view posts with multimedia content.
- Secured backend APIs, integrated with the **Angular** frontend via **HttpClient** service, and utilized **MongoDB** with Mongoose for advanced data management, including file upload and pagination features.
- Designed **user authentication** and session management using **Bcrypt** for password hashing and **JSON Web Tokens** for secure user sessions, integrating automated token refresh and error handling to enhance user experience.