

Hazel Yu

hazelyumyk@gmail.com | 949-439-8316 | github/HazelYuAhiru | Irvine, CA 92612

EDUCATION

University of California, Irvine

Expected Graduation: Spring '25

B.S. Computer Science(Honors Program), Minor in Mathematics

Senior | GPA: 3.98

- Coursework: Python, C/C++, Java Programming, Data Structure/Algorithm, Database Management, Network, System design, AI/Machine Learning, Statistics and Probability, Linear Algebra
- Dean's Honor List for 9 quarters

SKILLS

- **Languages:** Python, C++, C, Java, Golang, TypeScript, HTML/CSS/JavaScript, Swift
- **Frameworks/Libraries:** React.js, Next.js, Svelte, Vue.js, Three.js, Flask, TensorFlow, PyTorch, Numpy
- **Technologies:** Git, Linux, REST API, Docker, Kubernetes, MySQL, PostgreSQL, SQLite, CouchDB, Google Cloud Platform Computing Service, AWS EC2

EXPERIENCES

UC Irvine Office of Information and Technology(OIT)

Irvine, CA

Student Developer

May 2023 - Present

- Developed internal API tools and a Chrome extension using React Typescript and FastAPI to streamline the daily work of over 20 Help Desk staff and increased work productivity by 30%.
- Maintained and updated 5 OIT Help Desk managed databases and servers using Docker and Kubernetes.

UC Irvine Information and Computer Science Student Council(ICSSC)

Irvine, CA

Zotistics Project Committee

Sept 2023 - Present

- Maintained and updated the Zotistics project GitHub frontend codebase with React, enhancing frontend user experience and supporting daily usage by 2000+ UCI students.
- Implemented a secured API interface that retrieved past year grade distributions of all UCI-provided courses from the UCI database.

UC Irvine Cloudberry Lab

Irvine, CA

QueryBooster/SqlRewriter Project Student Researcher

July 2023 - Present

- Improved QueryBooster, a middleware-based query rewriting tool, interface by adding SQL query formatter and comparator using React.js.
- Designed and built a full-stack SQL community forum, SqlRewriter, using React, Next.js, and Python, allowing users to post SQL query rules, store rules on the backend using SQLAlchemy, and connect rules to QueryBooster.

PROJECTS

Fabflix

Java, HTML, Tailwind CSS, Javascript

- 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.
- Input 360,000+ movie information through DOM XML parsing and developed advanced search capabilities, including full-text search, autocomplete, and fuzzy search, improving search speed by 40%.
- Created application image in Docker containers, tested on AWS for containerization and scalability, and configured a Kubernetes cluster with automated master-slave MySQL setup on 10 instances, utilizing AWS S3 bucket for persistent state storage, reducing deployment downtime by 80%.
- Set up JDBC connection pooling, and configured load balancing to distribute database load, increasing system availability by 50%.

ICS Search Engine

Python, React.js

- Designed a crawler with trap detection that scraped and parsed over 20,000 UCI ICS department web pages, eliminating similar or uninformative webpages.
- Ranked the relevance of pages using the TF-IDF and indexing optimization algorithms, reducing query time to under 300ms.
- Developed a React.js web GUI interface to display searching results and show short summarization of each result using OpenAI API.