

Joyce Tsao

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Education

University of California, Irvine

Irvine, CA

Computer Science, B.S.

December 2023

- **Clubs:** Design @ UCI, WICS, Product Association
- **Relevant Coursework:** Data Structures, Algorithms, Discrete Math, Linear Algebra, Boolean Algebra, Requirements Analysis for Engineering, Project Management, Software Testing and Quality Assurance, Software Design

Technical Skills

Programming Languages: Python, C/C++, Java, SQL (MySQL, Postgres), HTML/CSS, Javascript

Development Tools: Git, VS Code, Visual Studio, PyCharm, Eclipse

Databases: PostgreSQL, Cassandra, MongoDB, Firebase

Experience

The Coder School

Irvine, CA

Code Coach

August 2023 – Present

- Develop custom games and coding exercises for students aged 7-16 in Python and Java.
- Provide one-on-one tutoring to students with various skill levels on coding concepts such as data structures, object oriented programming, and inheritance.
- Explore various coding platforms and IDEs in order to foster an engaging learning environment.
- Teach 5+ students per week, with improvements in their basic understanding on conditionals, loops, and debugging.

Ding Tea

La Jolla, CA

Shift Lead

May 2019 – September 2021

- Coordinate and record store finances, inventory, and time schedules to maintain smooth store functioning.
- Supervise team of 5 employees for over 200 store transactions per shift.

Projects

Journal Jams App | Typescript, HTML/CSS, Firebase, Ionic, React Native

- Mobile app that analyzed moods from users' text entries and users' past song preferences, to generate song recommendations using the Spotify API.
- Developed a full-stack mobile application with 3 classmates with Typescript and HTML/CSS.
- Personally designed and implemented the backend storage on Firebase DB for user personal information, song preferences, and past analyzations.
- Utilized Typescript, HTML/CSS, and React Native for front-end development.
- Effectively managed and collaborated on the project codebase using GitHub.

UCI Web Crawler and Search Engine | Python, Tkinter, Git

- Collaborated with a team of two classmates to develop a custom web crawling algorithm.
- Successfully crawled and collected data from a static corpus of UCI websites, and implemented data storage in JSON files for efficient retrieval and processing.
- Developed a custom search engine from generated results, and utilized a cosine similarity ranking system for accurate and relevant search results.
- Took the initiative to design and implement the entire GUI for the search engine using Tkinter, complete with hyperlinks and ranked relevant results.
- Conducted rigorous testing and quality assurance to ensure the search engine's functionality and performance.

C++ Text Editor | C++

- Developed a custom text editor using C++ with a focus on providing essential text editing features, including undo, redo, backspace, and navigation using arrow keys (up, down, side).
- Leveraged C++ libraries and data structures to optimize memory management and ensure efficient text manipulation.