

Cole Thompson

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TECHNICAL SKILLS

Languages: Python, JavaScript, Java, C/C++, HTML/CSS, SQL

Tools/Platforms: Git, Vim, Linux, Docker, AWS, Maven, Tomcat, Figma

Frameworks/Databases: React, Flask, Node.js, Express.js, MongoDB, PostgreSQL, MySQL

EDUCATION

University of California, Irvine

Irvine, CA

Bachelor of Science in Computer Science

Cumulative GPA: 3.88/4.0

Dean's Honor List, Regents' Scholar, Hack at UCI

Sep. 2021 – June 2025

Coursework: Data Structures & Algorithms, Semi-structured Data, Information Retrieval, Database Management

EXPERIENCE

AfterFlea OS

January 2024 – April 2024

Software Engineer Intern

San Francisco, CA

- Leveraged **React** and **JavaScript** to redesign the landing page, significantly enhancing visual appeal and user engagement metrics
- Integrated **MongoDB** and enhanced messaging functionality, supporting communication for 100+ user personas and improving message delivery/display
- Revamped the signup/login workflow for a fluid user experience that contributed to successful user registrations and used **Docker** to streamline development workflows which resulted in a 20% improvement in deployment efficiency
- Created detailed mockups via **Figma** for the platform's user feed feature, facilitating early user testing and feedback incorporation, which guided the development towards a more user-centric design

University of California, Irvine

January 2023 – June 2023

ICS Lab Assistant

Irvine, CA

- Supported and tutored 50+ students in building programs for a variety of problems and computing environments in **Python**
- Guided students in leveraging library modules for a range of applications including: graphics, databases, web APIs, networks and sockets

PROJECTS

Search Engine and Web Crawler

April 2023 – June 2023

Python, HTML/CSS, Flask, Beautiful Soup, NLTK, Hashlib, Git

- Designed a custom web search engine with the ability to handle 50,000+ documents and reduced average query response time to under 100ms by indexing token positions
- Incorporated **partial indexing** to save > 80% memory usage and made use of the **Snowball Stemmer** for better textual matches
- Improved ranking accuracy for a subset of the UCI web domain through **tf-idf scoring** and **cosine similarity** in addition to assigning **weights** for HTML tags
- Used **sim-hashing** to detect and eliminate near duplicate pages

Firecrest

May 2023 - September 2023

Python, Javascript, HTML/CSS, React, Flask, Langchain, Render, PostgreSQL, Git

- Implemented the frontend in **React** and backend in **Flask**, integrating with a **PostgreSQL** database
- Designed and launched custom LLM configuration features, increasing model, token, and temperature flexibility through user-defined parameters
- Built prompt topic browser to improve navigation and reduce average search time
- Added **OAuth 2.0** authentication and **2FA** to securely manage 20+ user accounts

GUI Chat Application

January 2022 – March 2022

Python, Tkinter, Git

- Developed a DSP platform direct messaging module with a GUI using **Tkinter**
- Ensured message history is preserved and accessible without requiring constant internet connectivity
- Utilized **sockets** to be able to send and receive direct messages with another user