# Mohammad Mirzaei

Irvine, CA
**(949-331-3740)**

✉ mirzaem1@uci.edu      🌐 moe131.github.io      🔗 linkedin.com/in/moemirzaei      🐙 github.com/Moe131

## EDUCATION

**Bachelor of Computer Science**                                                                                  **Irvine, CA**
University of California, Irvine | GPA: 3.97                                          September 2023 - June 2025

**Associate of Science**                                                                                              **Irvine, CA**
Irvine Valley College, Irvine | GPA: 4.00                                            September 2020 - June 2023

## SKILLS

● Python      ● Java      ● Javascript      ● TypeScript      ● C/C++      ● SQL      ● PostgreSQL      ● Git
● SQLite      ● React      ● Next.js      ● React Native      ● Firebase      ● AWS      ● HTML/CSS

## EXPERIENCES

**Full Stack Software Developer Intern**                                                                          **Irvine, CA**
*Mondego Research  Lab, University of California, Irvine*                          June 2024 - August 2024
● Utilized **LLMs** and **Retrieval-Augmented Generation** to develop specialized AI Immigration and Tax assistants.
● Crawled more than **30,000** IRS website pages and **6,000** USCIS website pages and stored their data.
● Worked on the **backend** to index documents, generate **embeddings**, and store them in the **vector database** using **Faiss**.
● Worked on frontend development using **Next.js** and **TypeScript**, including developing login functionality with Google/GitHub authentication via **NextAuth**.
● Configured full-stack functionality to store user data and conversations in an **SQLite** database.

**Website Developer**                                                                                                **Irvine, CA**
*Tournex crypto project*                                                              June 2022 - August 2022
● Developed an interactive and responsive website using **React JS** and **Javascript**
● Implemented a real-time cryptocurrency price tracker by integrating different **APIs** which resulted in a remarkable 60% increase in website traffic in the first month
● Collaborated in the **UX/UI** design process to create interactive and visually appealing user interfaces
● Conducted code reviews and provided constructive feedback to team members to maintain code quality and consistency.

## PROJECTS

**Cryptofolio Web Application**
*https://main.d2pujeh9fcxm5.amplifyapp.com/*
● Developed a full-stack cryptocurrency web application with **React** for the frontend and **AWS Amplify** for the backend.
● Implemented secure sign-up and login functionality using **AWS Authorization** to store user credentials in the database.
● Integrated third-party **APIs** (Coingecko) to fetch and display real-time cryptocurrency data.
● Developed a feature allowing users to create and manage personalized watchlists, storing these preferences in **DynamoDB** for quick access and updates.
● Built a **responsive**, user-friendly interface using **React**, ensuring compatibility for desktop and mobile devices.

**Search Engine Web Application**

- Built a **Python**-based search engine from scratch, capable of processing **hundreds of thousands** of documents or web pages with query response times under 300ms.
- Created a web application interface for the search engine using **Flask**.
- Integrated the **OpenAI API** to summarize page content and present concise summaries in the search results.
- Implemented **PageRank** and **relevance scoring** algorithms to dynamically rank search results, considering factors like keyword frequency, cosine similarity, and keyword placement within web pages.

### Web Crawler

- Designed and developed a web crawler using **Python** and libraries like **BeautifulSoup** to systematically browse the web.
- Designed crawling algorithms to discover and fetch web pages while adhering to politeness policies.
- Implemented **Simhash** algorithm for exact and near text duplication detection, ensuring the avoidance of duplicate content
- More than **12,000 URLs** within the **UCI** website subdomain were crawled, and their content was parsed for indexing.
- Collaborated with fellow students using **Git** and **GitHub** to divide tasks and streamline development efforts.

### Food Delivery App

- Developed a full-stack **React Native** application to help users find nearby restaurants using **Google Places API** and **Yelp API** and place delivery orders.
- Implemented functionality to view restaurant details, add items to a cart, and place orders directly through the app.
- Integrated **Firebase** database to save orders and used **Firebase Auth** for secure user sign-in
- Built a user-friendly and intuitive UI compatible with **Expo** for **iOS, Android, and Web platforms**.

### Hotel Reservation Application

- Developed a complete hotel reservation application using **Python**, focusing on providing users with a seamless and secure booking experience
- Integrated a relational **SQL** database (**SQLite**) to store user information, room details, and reservation data.
- Created a user-friendly interface for browsing available rooms, selecting check-in and check-out dates, and managing reservations using **Tkinter**

### Spotify Playlist Downloader

- Developed a **Python** script to automatically download Spotify playlist songs from Youtbue
- Integrated Spotify **API** to fetch playlist details and song metadata.
- Utilized **Selenium** WebDriver to automate the process of searching and retrieving song URLs from YouTube.
- Employed **Pytube** for downloading songs from YouTube.

## CAMPUS INVOLVEMENT

**IVC Computer Science Club**                                    **Irvine, CA**
*Webmaster*                                     September 2022 - June 2023
- Maintained and updated the club's website and managed the online platforms and tools used by the club.
- Implemented an intuitive and user-friendly feature that allowed club members to login to the website and upload their project for all website viewers, resulting in increased traffic and participation by members.

**UCI Artificial Intelligence Club**                                    **Irvine, CA**
*Member*                                     September 2023 - present
- Attended events and project meetings held by the club to work on real-world projects that have helped me apply theoretical knowledge to practical problems