

Hongen Lei

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EDUCATION

University of Southern California – Computer Science

Cumulative GPA: 3.5/4.0

Los Angeles, CA

Masters of Science in Computer Science

Class of 2024

Coursework: Analysis of Algorithms, Web Technologies, Database Systems, Foundations of Artificial Intelligence

University of California, Irvine – Computer Science

Irvine, CA

Bachelor of Science in Computer Science

Class of 2021

Cumulative GPA: 3.5/4.0

Coursework: Data Implementation and Analysis, Design and Analysis of Algorithms, Machine Learning & Data Mining, Databases and Web Applications, Computer Networks

PROJECTS

Business and Service Search Engine

Nov, 2022

- Developed a Full-Stack Web App and an IOS app that allows users to search for businesses and services near a specified location using **Angular**, **Bootstrap**, **Node.js**, and **SwiftUI**.
- Implemented intelligent search features, including keyword autocompletion, advanced filters, and detailed results, enhancing user experience and satisfaction.
- Deployed the Web version with **GCP**, ensuring a reliable and secure hosting platform.

Travel Advice App

Aug, 2022

- Developed a trip recommendation system that provides travel destinations based solely on a landscape image of the destination
- Implemented front-end using **React** and back-end using **Node.js** and a **MongoDB** database for storing destination and flight information
- Utilized **Node.js** to build **REST APIs** for fetching and organizing flight and destination data

Tumor Segmentation Project

May, 2021

- Developed **machine learning models** for **tumor identification and segmentation** using data from the MICCAI Brain Tumor Segmentation Challenge (BRaTS).
- Leveraged **TensorFlow** and **Pandas** libraries for model creation, training, and data management.
- Implemented **VGG**, **UNet**, **ResNet**, and **Inception Network** models to improve performance.
- Achieved **84% accuracy** in tumor segmentation.

Chat App

March, 2020

- Developed an Android chat app using **Android Studio**, **Kotlin**, and **Firebase**, with features including user authentication, real-time messaging, message notifications, and online presence indicators.
- Optimized the app for performance and scalability, using **Firebase Cloud Functions** and security rules to handle server-side logic and restrict access to sensitive data.

SKILLS

- **Languages:** Python, C++, Java, Kotlin, JavaScript, SQL, CSS, HTML
- **Frameworks and Tools:** Angular, Express.js, Node.js, MySQL, Firebase, AWS, GCP, Git, SwiftUI