



ShaoCheng Hsu



B.S., Computer Science, , 2020-2024

GPA: 3.58 Graduation Date: March 2024

Awards:

Professional Experiences

Full Stack Software Engineer, , Irvine, CA April 2024 - Present

- Engineered a multi-device management system using C++, enabling data acquisition from multiple power supply instruments with a sub-3 millisecond transportation time and improving system efficiency.
- Spearheaded the redesign and development of key landing and product pages by utilizing advanced CSS and JavaScript to enhance UI/UX and increasing user engagement by 60% and boost conversion rates and click-through rates.
- Optimized web content using SEO tools like Ahrefs and Google Analytics for doubling organic search traffic and increasing phone inquiry leads by 20%.

Machine Learning Engineer Intern, , San Francisco, CA January 2024 - April 2024

- Developed an AI-driven conversational language model using Langchain, generating personalized responses and task management suggestions, which enhanced user productivity.
- Designed a vectorized database, aiming to improve data processing efficiency and supporting real-time analysis for large datasets.
- Built and deployed a self-hosted website that supports hundreds of concurrent visitors, allowing users to manage daily tasks, store information, and interact with AI for personalized assistance.

Machine Learning Research Assistance, , Irvine, CA June 2023 - August 2023

- Designed and trained a convolutional neural network for a health device program that analyze patient's activities with structural modifications, achieving an exceptional accuracy rate of 96% in a collaborative research project.
- Developed and fine-tuned a multi-classifier model, overcoming domain shift challenges and improving model robustness.
- Applied advanced data transformation techniques on a dataset of over 10 million entries, refining the data pipeline for both structured and unstructured data.

Professor Amir Rahmani's Data Analyzing Research Intern, Remote February 2023 - April 2023

- Supervised under the guidance of Professor Amir Rahmani at UCI's Computer Science Donald Bren School of Information.
- Cleaned and analyzed sleep device data to extract meaningful insights and patterns for health research.
- Generated actionable insights to support ongoing device development and improvements in health monitoring systems.

Community Involvement

Cybersecurity Club, Member, University of California, Irvine, CA September 2022 - January 2024

- Performed comprehensive system security assessments, identifying and remediating critical vulnerabilities to strengthen network infrastructure security.
- Executed advanced penetration testing and ethical hacking simulations in order to enhance threat detection capabilities and further improve security incident response times.
- Led cross-functional security knowledge-sharing initiatives among cybersecurity professionals, for establishing practices and promoting collaborative defense strategies.

Artificial Intelligence Club, Member, University of California, Irvine, CA September 2022 - September 2023

- Collaborated on AI projects, applying deep learning and NLP methods to solve complicated problems.
- Attended workshops led by professionals, sharpening skills in AI fields and keeping up-to-date with the latest advancements.
- Built lasting connections with high-achieving peers, engaging in continuous learning and innovation within the community.

Relevant Projects

Online Fashion Store Recommendation April 2024

Collaborators: 2 UCI students (Coding competition project)

- Integrated an AI API to recommend outfit colors based on the user's mood, occasion, and scenario.

- Developed a recommendation system for outwear across multi-brand online stores, such as Nordstrom, SSENSE, and Macy's.
- Utilized Javascript, React, HTML, CSS, Python, and MongoDB for backend functionality and web implementation.

AI Assistant

February 2024 – April 2024

Personal Project

- Created a personalized AI assistant that answers user-specific questions based on documents they upload into the system.
- Implemented user authentication and storage with Firebase, using Chromadb to vectorize stored data for better response generation.
- Utilized Python, AWS, Pytorch, Streamlit, and the ChatGPT API to build the assistant's functionality.

Health Wellness App (CalmFlowBalance)

January 2024 – March 2024

Class Project

- Designed an app to promote a balanced lifestyle by tracking and recording user habits, offering personalized recommendations.
- Integrated with wearable devices to track activity and provide insights into optimizing sleep, exercise, and meditation routines.
- Built using Swift and Firebase, with features like habit trend visualization and stress relief through music.

Autonomous S&P 500 Trading Bot

September 2023 – December 2023

Class Project

- Built an autonomous trading model using reinforcement learning, achieving a 15% annual return over five years of S&P 500 data.
- Implemented actor-critic techniques and temporal ensembling to optimize stock predictions.
- Incorporated Python and the Yahoo API for stock data retrieval and analysis.

Health Device Program

June 2023 – August 2023

Role: Assistant (Research project)

- Optimized and trained Python-based machine learning models to analyze wearable device data, identifying users' current exercise categories.
- Applied Convolutional Neural Network (CNN) to improve data structuring and model accuracy.
- Provided insights to enhance user experience in health tracking.

Interactive Online Learning Platform

September 2022 – December 2022

Class Project

- Developed an interactive learning platform focusing on geometry, using interactive graphs and functions for effective teaching.
- Offered comprehensive math lessons covering multiple topics, including theorems with detailed explanations.
- Programmed using C++, Javascript, HTML, CSS, and SQL.

SKILLS

- **Programming Languages:** C++, Python, C, SQL, Matlab, JavaScript, Java, HTML, CSS
- **Frameworks & Deployment:** React, Flask, Swift, Docker, Tableau, Git, AWS, Firebase
- **Database:** MySQL, MongoDB