Catherine Chen

ccrchen@ucdavis.edu | (510) 480-7636 | cath-chen.github.io

EDUCATION

University of California, Davis   **Expected June 2024**
Bachelor of Science in Computer Science
   Relevant Coursework: *Data Structures; Intro to Design; Intro to Data Science; Artificial Intelligence*

SKILLS

- **Skills:** Git, Figma, Canva, Microsoft Office (PowerPoint, Word, Excel), Google Workspace
- **Languages:** Python, C, HTML, CSS, R

PROJECTS

C-Docs: Open-Source C Documentation Website   **May 2022–Present**
- Authored articles about introduction to data structures and Linux command line interface in C
- Collaborated with a team of 5 to publish and organize Markdown articles in a public repository on Github
- Led meetings to discuss and outline website interface design and implementation as a developer

Chinese Numbers MNIST   **September 2022**
- Trained a convolutional neural network to identify 15 handwritten Chinese numbers using a data set of 15,000 images of handwritten Chinese characters using Python and TensorFlow
- Tested different hyperparameters to achieve over 96% accuracy in both validation and testing stages

Connect 4 AI Player   **August 2022**
- Implemented the minimax algorithm and an evaluation function in an AI player in Python
- Tested different weight matrices for the evaluation function to obtain the highest winning rate
- Wins against Monte Carlo Tree Search Player 19 out of 20 games
- Placed in the top 40% in a competition of 15 minimax AI players

ReqCheq, HackDavis 2022   **April 2022**
- Designed an interface using Figma for a website which returns a list of classes offered at UC Davis that students can take based on classes they have taken and prerequisite requirements
- Collaborated with a team of four to develop a program and built a website prototype in 24 hours
- Pitched project to judges and promoted possible impact of project on university students

Connect 4 Game   **October–December 2021**
- Built a game of Connect 4 using object-oriented programming and unit testing in Python
- Users can specify game parameters like board size, player pieces, and player types (two AI player types)

AI Cleaning Detector, AI Camp   **July 2020**
- Developed a functioning object detection AI that detects clean and messy areas of rooms using Python and the YOLO algorithm
- Cleaned and labeled thousands of images to create a data set of clean and dirty rooms
- Designed and implemented AI in a website as the lead designer of a team of 6

EXPERIENCE & INVOLVEMENT

UC Davis DataLab Team Member   **March 2022–June 2022**
UC Davis DataLab
- Coded a publication search system using R for Dr. James Trimmer's NeuroMab antibody database
- Built a web scraping function to scrape Google Scholar result pages to duplicate manually collected data
- Created a list of unique NeuroMab antibody targets to be used to search through full text publication articles

UX Design Fellow   **April 2022–June 2022**
UC Davis Design Interactive

- Designed a Hinge Figma prototype with new design implementations as part of Fellowship Design Challenge
- Conducted user research to make human-centered design decisions