Catherine Chen

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EDUCATION

University of California, Davis **December 2024**
Bachelor of Science in Computer Science **GPA:** 3.84

- **Relevant Coursework:** *Software Development; Data Structures and Algorithms; Machine Learning*

SKILLS

- **Programming Languages:** Python, C++, HTML, CSS, R, JavaScript, Typescript, SQL, Java
- **Technologies:** Git, React, Jira, Linux, UNIX, Snowflake, MongoDB, Jupyter Notebook, Pandas, Numpy, Figma

EXPERIENCE & INVOLVEMENT

Software Developer, CodeLab Davis **October 2022–Present**

- Developing a full-stack application with React and MongoDB for UC Davis students to plan their degrees
- Utilized REST APIs to integrate MongoDB with Typescript backend and Tailwind CSS for frontend design
- Collaborating with student developers and designers to research and tailor to user needs

Data Analyst Intern, Centene Corporation **June 2023–September 2023**

- Worked with the Quality Data Hub team to standardize data for Quality Risk Adjustment Analytics
- Improved data accessibility by cataloging 900+ column descriptions to integrate into Snowflake tables
- Leveraged Snowflake SQL to perform data profiling to check for inaccuracies, errors, and missing info
- Gained proficiency in data flow analysis, data quality assessment, and Agile software development

Research Assistant, UC Davis DataLab **March 2022–June 2022**

- Enhanced the Google Scholar-based publication search system for UC Davis NeuroMab Facility using R
- Built web scraping functions to scrape 60 pages of Google Scholar results returning 600+ publications
- Compiled a list of unique NeuroMab antibody targets to be used to search through full-text articles
- Analyzed and cleaned NeuroMab antibody data in scraped articles to check for errors and relevance

PROJECTS

Pokemon Rank Classifier **September 2023–December 2023**

- Implemented a ML classifier in Python to determine Pokemon ranks based on a Pokemon's statistics
- Achieved 93% testing accuracy when using the support vector machine classifier model
- Deployed model in a website using Flask which allows users to choose a Pokemon to classify its rank

Training Tool, CodeLab Davis **October 2022–June 2023**

- Developed the Project Manager dashboard with React and JavaScript for an internal bootcamp website
- Built custom reusable components and integrated code from open-source libraries

Davis Route Planner **September 2022–December 2022**

- Developed a route planner from XML and OpenStreetMap data for the Davis bus system using C++
- Created a Makefile to automate file execution and unit tests with Google Tests

Chinese Numbers MNIST **September 2022**

- Trained a convolutional neural network to identify 15 handwritten Chinese characters using a dataset 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