

Claire Hsieh

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Website: <https://claires-personal-portfolio.netlify.app/>

EDUCATION

Bachelor of Science - Genetics and Genomics

Expected graduation June 2024

University of California, Davis

GPA: 3.7

Minor: Quantitative Biology, Statistics

Relevant coursework:

- Statistical Data Science
- Regression Analysis
- Probability & Stochastic Processes with Applications to Biology
- Linear Algebra
- Comparative Genomics
- Functional Genomics
- Genes and Gene Expression
- Data Structures
- Theory & Practice of Bioinformatics

TECHNICAL SKILLS

Programming Languages: Python (numpy, pandas, matplotlib), R, Perl, BLAST, MATLAB

Software: YASARA

Operating System: Windows, Linux, Unix

Version Control: Git

RESEARCH SKILLS

- General Laboratory
- Bacteriology
- Gel Electrophoresis
- qPCR
- Grid Preparation (Electron Microscopy)
- Plaque Assay
- Miniprep (DNA extraction)

RESEARCH INTERESTS

- Analyzing and modeling gene structure and function
- Predicting and modeling the effects of drugs on gene expression

RESEARCH EXPERIENCE

Research Assistant | Topological Molecular Biology Lab | Apr 2022 – Present

- Utilize profile HMMs in predicting SARS COV-2 mutation probabilities by adding weights based on country
- Clean and align genomic data sets (MAFFT, Clustal Omega)
- Grow and collect microbial cultures
- Set up and perform gel electrophoresis
- Prepare frozen samples using GP2 and image using Cryo-EM
- Design primers
- Extract DNA using miniprep or chloroform

Research Assistant | Korf Lab | Dec 2022 – Present

- Design python programs that utilize intron position in the prediction of gene enhancement
- Design algorithms to find motifs using discretized position weight matrices, regex, and kmers

CLUBS

Davis Data Science Club | Social Media Officer | Sep 2022 – Present

- Design and distribute posters to promote club meetings and events

COMMUNITY SERVICE

Priceless Pets | Jan. 2019 – Feb. 2020

- Walked dogs

LANGUAGES

English: Native Language

Mandarin: Intermediate Listener, Intermediate Speaker, Beginner reading and writing

PROFESSIONAL TRAINING

US Cyber Challenge | Jul 2022

- Coursework: Memory Forensics, Network Forensics, Linux

Scientific Computing with Python | freeCodeCamp | Mar 2022

- https://www.freecodecamp.org/certification/Claire_Hsieh/scientific-computing-with-python-v7

Data Analysis with Python | freeCodeCamp | Jan 2023

- https://www.freecodecamp.org/certification/Claire_Hsieh/data-analysis-with-python-v7

OTHER

Hobbies: Reading, Playing guitar