

Claire Hsieh

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Education

Bachelor of Science | University of California, Davis | Expected Graduation: Jun 2024

- Major: Genetics and Genomics
- Minor: Quantitative Biology and Bioinformatics, Statistics
- Coursework: Linear Algebra, Probability, Regression Analysis, Bioinformatics, Data Structures, Comparative Genomics, Data Science
- GPA: 3.7

Skills & Abilities

Programming:

- Programming Language: Python (NumPy, Pandas), R, MATLAB, YASARA, Perl, BLAST
- Command Line: Windows, Linux
- Version Control: Git
- Proficient in Microsoft Office

Laboratory:

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

Language:

- Intermediate Chinese (spoken)

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 (Clustal Omega, MUSCLE, MAFFT)
- Grow and collect viral cultures and extract DNA using miniprep or chloroform
- Set up and perform gel electrophoresis
- Prepare frozen protein samples using GP2 and image using Cryo-EM
- Design primers and perform qPCR to determine the concentration of DNA in viral phage samples

Research Assistant | Korf Lab | Dec 2022 – Present

- Design python programs that utilize intron position in the prediction of gene enhancement
- BLAST genomes to find introns with possible roles in gene regulation
- Design algorithms to find motifs using discretized position weight matrices

Accounting Assistant | Quicklinks Advisor 365 | Aug 2020 - Present

- Create and update financial statements
- Reconcile transactions and identify discrepancies

Clubs

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

- Design posters and flyers to advertise meetings and events