

Sofia Kwee

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EDUCATION

University of California, Berkeley '23

GPA:3.5/4.0

data science major in the College of Letters and Science

- concentration in computational biology

PROFESSIONAL EXPERIENCE

UCSD Mentor Assistance Program, Scripps Institution of Oceanography September 2017 - May 2019

- Analyzed Doppler radar data to predict the location of pollution from the Tijuana River and coded in MATLAB to create diagrams and a short video depicting the pollution trajectory.
- Programmed in MATLAB to combine satellite images and data from buoys that froze in icebergs near the North Pole and drew conclusions on the behavior of icebergs.

CLEAR BLUE SEA RESEARCH INTERN

June 2018 - August 2018

- Compiled multiple documents, websites, and interviewed experts to write a research paper on the effects of the ocean currents on the Great Pacific Garbage Patch. Published in the Clear Blue Sea newsletter.
- Collaborated with engineers to help build a robot to pick up pollution in the ocean.

PROJECTS

Data Science, Genetics and Genomics

December 2019

- Normalized 12,000 data points on B, T, and Nk cells from young and old mice and created a PCA and t-SNE plot of their distribution using Matplotlib, Scikit-Learn, Pandas and Numpy.
- Programmed machine learning algorithms: nearest neighbors, logistic regression and random forest to predict if a mouse is old or young with 78% accuracy.

Business Analysis and Projection

December 2020

- Simulated business cases predicting needed resources and projected profits for pharmaceuticals.
- Created adjusted multivariate linear regression models predicting machine efficiency with 99% accuracy.

SKILLS

Programming Languages / Platforms

- Java, Python, MATLAB, C, SQL, HTML/CSS, Linux, Scheme

Tools and Software

- Jupyter Notebook, NumPy, Matplotlib, scikit-learn, pandas, Git, Microsoft Office, IntelliJ

RELEVANT COURSEWORK

UC Berkeley

- Data Structures (Java), Linear Algebra and Differential Equations, Foundations of Data Science, Structure and Interpretation of Computer Programs (Python), Data Science in Environmental History, Data Science for Social Impact, Data for Business Decisions, Chemistry with Lab

EXTRACURRICULAR

Lab Assistant

January 2020 - current

- Leading a lab of 30 students for the class Foundations of Data Science with a graduate student.
- Guided students through Jupyter Notebook and taught them Python, Numpy, and data science.

Curriculum Developer at Big Data at Berkeley

January 2020 - current

- Teaching an introductory data science class to high school students around the world.
- Developing projects and lessons for students using Jupyter Notebook, Python, and scikit-learn.

Vice President of Standards and Values of Sigma Kappa

December 2020 - current

- Leading the 200 members of Sigma Kappa managing their safety and liabilities.