

EXPERIENCE

• **University of California, Davis**

Davis, CA

*Undergraduate Researcher; Statistics Department**May 2020 - Present*

- **Research Lead:** Managed every aspect of the research project from data collection to model building.
- **Music Information Retrieval:** Used librosa for leveraging audio transformations inside and outside of the time-frequency domain such as Fast Fourier Transformations, Log-frequency power spectrograms, and Mel Frequency Cepstrum Coefficients (MFCCs.)
- **Blind Source Separation:** Currently building a Convolutional Neural Network in Tensorflow to extract vocals from the input songs.

• **Mathnasium**

Davis, CA

*Mathematics Tutor**September 2019 - Present*

- **Improved Scores:** Worked one-on-one with children diagnosed with ADHD and Autism to help improve homework and test scores.
- **Tutoring:** Tutored Math part-time at every academic level ranging from Kindergarten to AP AB/BC Calculus.
- **Learning:** Refined teaching methods over time to allow for students' maximised retention given their various learning habits.

• **Hindsight Technology Solutions**

Remote

*Machine Learning Intern**August 2019 - February 2020*

- **Web Scraping:** Created large-scale web scrapers to retrieve a minimum of 500 articles at a time.
- **Data Cleaning:** Parsed and cleaned through corpus data to retrieve key words/entities of each document.
- **Web Apps:** Developed a web application using streamlit as an extension of a Natural Language Processing (NLP) model to facilitate semi-supervised training.

• **Penji**

Remote

*Data Science Intern**January 2019 - August 2019*

- **Marketing Analysis:** Created and studied Key Performance Indicators (KPIs) to analyze marketing results - improved marketing strategies by 20%
- **Data Dashboards:** Leveraged Jupyter notebooks and Python classes to automate tracking of the app's virality across numerous campuses.

PROJECTS

- **Audio Classifier:** Utilized signal processing and supervised machine learning techniques to predict instruments with an accuracy of 98%.
- **Portfolio:** Built and deployed a static personal website using Hugo, Markdown, and Netlify.

RELEVANT COURSES

- **Supervised/Unsupervised Statistical Learning:** Two class series that focused on numerous methods of regression, classification, clustering, and statistical learning adjunct with implementation of algorithms using sklearn.
- **Statistical Data Science/Big Data Technologies:** Three series class in which students learn about data analysis and model building utilizing the tools in R, Python, and SQL.
- **Probability Theory/Mathematical Statistics:** Three series classes which began with an introduction to the rules of probability and developed towards parameter estimation and hypothesis testing using mathematical statistics.
- **Applied Time Series:** Studied and analyzed stationary time series models using autoregressive, moving average, and ARIMA models.
- **Bayesian Data Analysis:** Developed intuition on the properties of multi-dimensional prior and posterior distributions as well as various random sampling methods.

EDUCATION

• **University of California, Davis**

Davis, CA

*Bachelor of Science in Statistics - Machine Learning Track; GPA: 3.15**Sep. 2017 - June 2021*