Christopher Chan

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Education

University of California, Santa Barbara June 2018
Aquatic Biology, B.S.,
Minor: Anthropology

Personal Projects

Devereux Slough Time Series May 2019
Created a seasonal ARIMA with a Fourier Transform in R.

- Created a data pipeline that aggregated and cleaned over 10,000 data points.
- Analyzed the data and model, provided ecological explanations for the trends seen in the ARIMA model.

San Francisco Food Truck Map Feb. 2019
Created an interactive Plotly map of food trucks in San Francisco. Found that food trucks cluster around three main areas in the city.

- Statistical and spatial analysis conducted in Python with Jupyter Notebook, SciPy, Pandas and Seaborn libraries.

Superstore Sales Prediction Jan. 2019
Predicted the sales of products based on location and pricing data.

- Built and tuned a random forest model in R. Improved accuracy of sales prediction by 58.77% over baseline model.
- Created a Tableau dashboard and wrote a report that outlined key findings and areas of improvement.
- Discovered that the price had more than 1.5 predictive power than all other factors combined.

Experience

Lab Test Assistant

ViewRay Mar. 2019 – Present
Assisted engineers with testing of novel radiation treatment system.

- Wrote VBA scripts that analyzed over 400 risk assessment.

Ecology Intern

Santa Barbara Audubon Society Mar. 2017 – Jun. 2018
Collaboratively established a water quality monitoring program from the ground up which gathered data on the health of an estuary.

- Cleaned, analyzed and visualized water quality and invertebrate data with R and ggplot2. Presented the results to a non-scientific audience.
- Built the program from a two-person operation to a multi-agency enterprise with 4 volunteers and 4 interns.

Undergraduate Researcher

University of California Santa Barbara, MSI Jun. 2017 – Jun. 2018
Analyzed long-term ecological trends and produced reliable, detailed data with an interagency team.

- Created a mixing model from stable isotope data with R.

Profile

Analytical and self-driven performer with a proven track record of balancing multiple tasks and solving complex problems. Competent in data analysis, experimental design, communication for technical and public audiences. Excited by the challenge of capturing and understanding the vast amounts of data that exist.

Technical Skills

Languages:

- Python (NumPy, Pandas, Matplotlib, scikit-learn)
- R (dplyr, ggplot2, lm)
- SQL
- Bash

Software

- Linux
- Git/GitHub
- Tableau
- MS Office

Machine Learning

- Regression
- Decision Trees
- Random Forest
- Naïve Bayes

Statistics

- Descriptive
- Inferential
- Time series

Related Coursework

- Statistics
- Biometry
- Writing Science/Technology
- Modeling Environmental & Ecological Change