Seth Arreola

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EDUCATION

California State University of Fullerton Fullerton, CA
Masters of Science in Statistics *Aug. 2021 – May 2023*

California State University of Fullerton Fullerton, CA
Bachelors of Arts in Mathematics *Aug. 2018 – Dec. 2020*

Crafton Hills College Yucaipa, CA
Associates in Science Degrees: Mathematics, Economics *Aug. 2014 – May 2018*

EXPERIENCE

Mathematics/Statistics/and R-programming Tutor Dec. 2020 – Present
San-Bernardino, Orange Counties, and Remote *CA*

- Assisted and tutored Graduate, Undergraduate, and High school students in a rage of mathematics and statistic topics. Moreover, help students translate statistic topics and ideas into actionable R-code.
- Statistics topics include: Probability Theory, Classical Statistical Inference, Bayesian Computation and Inference, Classical Statistical Modeling including GLM's, Unsupervised Learning including Clustering techniques, Supervised Learning including Modern Statistical/Machine Learning techniques.

Undergraduate Research Assistant Aug. 2020 – May. 2021
CSUF [Portfolio-page](#) *Fullerton, CA*

- Research consisted of developing a series of statistical models that were applied to COVID-19 data in order to model the transmission of the virus, along with gaining insight into the nature of transmission effectiveness among differing counties with respect to mobility data. Tools used for exploration and modeling include R, rShiny, and ggplot
- Findings were presented to the National Conference of Undergraduate Research.

DeLand Research Assistant Jan. 2020 – Aug. 2020
CSUF [Portfolio-page](#) *Fullerton, CA*

- Assisted with creating novel methodologies for estimation and convergence of probability distributions.
- Worked in conjunction with statisticians from CSUF, University of Waterloo, and geologists from CSUF, and UCLA to estimate rainfall hiatus at Barley Lake as a consequent of climate. Methodologies and results were documented and was submitted to the Journal of Environmental Statistics.

PROJECTS

A Statistical Analysis of San Francisco Airbnb Data Sep. 2022 – Dec. 2022
[Portfolio-page](#)

- In this analysis, a predictive engine is developed to predict the price per night of a given listing to the benefit of property owners, helping them gauge their listings worth, coupled with extensive exploratory data analysis. The study is focused on Airbnb's San Francisco market place, where multiple model were developed (including tree-based methods: Random Forests and Extreme Gradient Boosting, as well as Neural Networks), where the final model explains 75 percent of the variability in these Airbnb listings.

MLB Pitch-type Analysis Jan. 2022 – May 2022
[Portfolio-page](#)

- In this project a range of robust statistical models were applied to MLB data (saber-metrics) in order to model strike calls made by umpires, for the purpose of acquiring insight into the nature that pitch-types has on umpires effectiveness at making correct calls. Specifically, focus was made on pitches and calls that are considered on the edge of the zone. Results suggest the probability of a strike call is not consistent in this zone among differing pitch-types.

TECHNICAL SKILLS

Expert in: R-programming(4+ yrs) and related packages (tidyverse ggplot), RMarkdown, RShiny, LaTeX, Microsoft(Excel, PowerPoint, and Word), SPSS
Knowladge of: Python, SQL, git, tableau