ALEXIS CASAS

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EDUCATION

University of San Francisco, CA *August 2016* - Graduation *May 2020*
BS in *Physics* Overall GPA: 3.51
Minors in *Business Analytics & Physics Engineering*
Honors: Sigma Pi Sigma Member, Clare Boothe Luce Scholar, Women in Physics Communications Chair

CAREER OBJECTIVE

Hardworking and dependable individual, with a profound understanding of mathematics and genuine passion to learn. Currently seeking to apply problem solving and analytical abilities to improve systems of operations.

PROJECTS

Covid-19 Predictions and Time Series Forecasting
Investigated Random Forest's power over Decision Tree's while predicting who is most likely to be hospitalized for Covid-19. Employed Feature Ranking and examined bias through ROC Analysis and K-Fold Cross Validation. Found ARIMA to outperform Random Forest for time series forecasting the number of cases in the US.

Restaurant Reviews
Conducted sentiment analysis using NLP to classify customer reviews into positive or negative. Utilized SVM to calculate the probability of receiving a recommendation from each user. ROC analysis provided confidence for the resulting 79.5% prediction accuracy.

Advertisement Interaction
Employed KNN, SVM, and Logistic Regression to predict which individuals would interact with an ad and achieved up to 97.6% accuracy. Preformed variable ranking to determine the relevant information for future campaigns.

Improving Bzzt Podtaxi Operations
Organized, cleansed, and merged large geographical data sets in R. Then, applied K-Means Clustering to identify different boroughs within Stockholm, Sweden and determine optimal Podtaxi starting points.

Coffee and Tea Production Across the US
Created and presented Tableau dashboards identifying key areas for business improvement. Some story-telling visualizations include: Pareto Graphs, Waterfall Charts, and Animated Time Series.

SKILLS

Programming:	R, Python, SQL, LaTex, Jupyter Notebook, Tableau, Microsoft Excel
Technical:	Problem Solving, Data Visualization, Data Cleansing, Statistical Modeling, Classification, Machine Learning, Logistic Regression, Random Forest, SVM, Time Series Forecasting
Certificates:	SQL Fundamentals , APIs and Webscraping, Python for Data Science: Intermediate

RELEVANT EXPERIENCE

Business Analytics Department, University of San Francisco *January 2020- May 2020*
Teaching Assistant: Advanced Business Analytics in R
· Guest lectured on using Google APIs as a data visualization technique for K-Means Clustering.
· Improved students' understanding in machine learning algorithms while enhancing their critical thinking techniques.
· Thoughtfully crafted homework solutions, carefully graded student work and provided constructive critical feedback.
· Enthusiastically investigated machine learning techniques and problems that resulted in new lecture material.

Business Analytics Department, University of San Francisco *August 2019- May 2020*
Research Assistant
· Achieved and exceeded weekly data science goals set by research advisor while working on large software projects.
· Organized public transit data into data frames and worked with Google APIs to generate transit models in Python.
· Read a variety of machine learning papers and communicated key points in an understandable manner.
· Collaborated with professors to design a presentation on data valuation for upcoming academic conferences.
· Assisted in drafting papers for publication via LaTeX under time constraints.

Physics and Astronomy Department, University of San Francisco *January 2019- March 2020*
Physics and Math Tutor
· Conducted weekly tutoring sessions for Methods of Mathematical Physics and Introduction to Physics.
· Transformed students' understanding of material by developing and enhancing their analytical techniques.
· Analyzed and reviewed department lecture material, homework solutions and exams before released to students.