

# ALEXIS CASAS

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## EDUCATION

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**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

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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

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### 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.

### Advertisement Interaction

Utilized K-NN, SVM, and Logistic Regression to predict the likeliness an individual would interact with an ad and achieved up to 97.6% accuracy. Also used variable ranking to determine useful variables.

### App Popularity: Google vs Apple Market

Analyzed and cleansed large data sets in Python and made projections on which app profiles could be profitable.

### Restaurant Reviews

Used Sentiment Analysis, specifically bag-of-words, to create a word cloud of common phrases left for reviews, and predicted the probability of receiving a recommendation from each user.

### Improving Bzzt Podtaxi Operations

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

## SKILLS

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**Programming:** R, SQL, Python, Numpy, Scipy, Pandas, Jupyter Notebook, Microsoft Excel

**Technical:** Problem Solving, Data Visualization, Ad Hoc Analysis, Machine Learning, Regression, Classification, Data Cleansing, Web Scraping, Time Series

**Relevant Courses:** Quantitative Business Analysis, Data Visualization, Business Statistics  
Advanced Business Analytics, Analytical Mechanics, Computational Physics

**Certificates:** SQL Fundamentals , APIs and Webscraping, Python for Data Science: Intermediate

## RELEVANT EXPERIENCE

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### Business Analytics Department, University of San Francisco

*August 2019- Present*

*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.

### Business Analytics Department, University of San Francisco

*January 2019- Present*

*Research Assistant*

- Read and organized public transit data into data frames and worked with Google APIs to generate transit models in Python and R.
- Read a variety of machine learning papers and communicated key points in an understandable manner.
- Designed visually appealing business Power Points for academic lectures.
- Assisted in drafting papers for publication via LaTeX.

### 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.