Zachariah Zanger M.S.
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PROFESSIONAL EXPERIENCE

UNIVERSITY OF SAN FRANCISCO BASEBALL — San Francisco, CA
Director of Quantitative Studies — ***September, 2018 – Current***

- Volunteer and lead the University of San Francisco Baseball Quantitative Studies Team to be the Quantitative Support and Research arm of the University of San Francisco Baseball program.
- Continuously develop automated back end systems for analysis of different data streams such as Rapsodo for use in Player Development / Player Evaluation / and Advanced Scouting.
- Develop the application of items, including, but not limited to: The automation of analysis, Monte Carlo and Markov Chain Simulation, Bayesian Statistical Inference, Data Visualization, and Fixed Income Valuation framework to player scholarships.

WAREHAM GATEMEN BASEBALL — Cape Cod, MA
Assistant General Manager Intern — **April, 2019 – September, 2019**

- Contributed analysis to support the decision-making process with respect to player personnel management, team and player output monitoring, all while being as accessible as possible to players and coaches.
- Developed and utilized an automated draft model for a 2019 Cape Cod League draft exercise. The model was built upon utility economics and linear programming principles. In the draft exercise, cost was a modeled constraint.
- Developed automation of analysis with Blast Motion Data utilizing frameworks such as Autocorrelation, Bayesian Inference, and Machine Learning. Development of Shiny web app for Blast Motion Data is an ongoing implementation.

FEDERAL HOME LOAN BANK OF SAN FRANCISCO — San Francisco, CA
Fixed Income Analyst — ***October, 2017 – April, 2019***

- Value the bank's portfolio of Agency and Non-Agency mortgage securities, including: Mortgage Backed Security (MBS) Pools, Collateralized Mortgage Obligations (CMO), Interest Only tranche bonds, and Municipal Housing bonds among other fixed income securities on a monthly and ad-hoc basis.
- Monitor daily high-level signals of asset appreciation/depreciation in Fixed Income markets. In addition, created quarterly duration stress tests on portfolio securities to measure interest rate sensitivity.
- Integrate machine learning principles of prediction and classification to the bank's portfolio of whole loans in R.

OLIVER INVESTMENT BANKING — Broomfield, CO
Analyst — *May, 2015 – June 2017*

- Individually contributed to transaction processes by preparing superb marketing materials, valuations, and prospective investor lists among other items.

DENVER NORTH HIGH SCHOOL — Denver, CO
Baseball Coach — ***May, 2014- May, 2016***

- Posted an overall 22-6-2 record as manager of Freshman and JV (after being promoted) clubs in 2 seasons of managing, in addition to participating and sometimes coordinating offseason Baseball program.

EDUCATION

UNIVERSITY OF COLORADO BOULDER, LEEDS SCHOOL OF BUSINESS — Boulder, CO
Master of Science in Finance — ***May, 2017***

REGIS UNIVERSITY, COLLEGE OF BUSINESS AND ECONOMICS — Denver, CO
Bachelor of Science in Economics — ***May, 2016***

DATACAMP (169, 876 XP earned, 30 Courses Completed, 2,378 Exercises Aced)

- **Relevant Courses:** Intro to Machine Learning in R, Machine Learning Toolbox in R, Non-Linear Modeling in R with GAM's, Bayesian Modeling with RJAGS, Supervised Learning with scikit Learn in Python, Writing Functions in R, Data Manipulation in R with dplyr, Data Visualization with ggplot2 in R, Intermediate Python for Data Science, Python for R users, Supply Chain Analytics in Python with PuLP, Web Scraping in Python. Statistical Thinking in Python, Introduction to Data Visualization with MatPlotLib, Bond Valuation in R

COURSERA

- **Relevant Courses:** Discrete Optimization (in progress), Game Theory, Algorithms Specialization through Stanford University (in progress) Bayesian Statistics from Concept to Data Analysis, Bayesian Statistics Techniques and Models, Microeconomics: The Power of Markets, Probability and Data with R (in Progress)