David A. Saadatnezhadi

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Education

BACHELOR OF SCIENCE, MATHEMATICS | GPA 3.25/4.0 **May 2020**

Rose–Hulman Institute of Technology

- Minor: Data Science
- Related Courses: Intro to Software Development, Object-Oriented Software Development, Probability, Differential Equations, Linear Algebra, Functions of a Real Variable, Quality Methods, Biostatistics, Econometrics, Deep Learning, Data Mining, Machine Learning, Statistical Programming

Work Experience

NYSE Arca Options Exchange **Summer 2019**

MJT Software Development

Trading Intern | San Francisco, CA

- Acquired introductory knowledge of options, risk management strategies, and the relationship between market makers, brokers, and regulators on the exchange floor
- Examined theoretical pricing models and volatility skews to detect trades with minimal risk
- Investigated relationships between option greeks and how recurring changes in the market affect option pricing

Proctor Engineering Group **Summer 2018-2019**

Data Analyst | San Rafael, CA

- Utilized a complex algorithm to analyze the performance of air conditioning units
- Optimized the data for contractors to use with their customers
- Communicated with technicians and customers daily and recommended potential repairs

Skills

- Coding Languages: R, Python (e.g. Sklearn, Pandas), Java, MATLAB, HTML, Maple, Minitab
- Software: Jupyter Notebooks, Microsoft Office Suite (Word, Excel, and PowerPoint), LaTeX

Projects

March Madness Machine Learning Project **March – May 2019**

- Applied machine learning techniques to NCAA Division I basketball data
- Utilized Python to predict winners using feature engineering, PCA, logistic regression, KNN, decision trees, random forests, gradient boosting, and support vector machines

College Swimming Data Mining Project **December – February 2019**

- Performed data mining techniques on collegiate swimming data
- Used Python to analyze the dataset, generated a predictive model, and create data visualizations such as boxplots, decision trees, K-means clustering, and a dynamic heat map

Spatial Wildfire Occurrence Data Challenge **September – November 2018**

- Analyzed spatial wildfire occurrence data for the United States from 1992-2015
- Implemented R to clean and plot the data and fit multivariable linear regression models, ANOVA models, and Turkey's HSD multiple comparison method

Leadership

- Rose-Hulman Men's NCAA Division III Basketball Team 2016 – Present
  - Teammate Award, NABC Honors Court member
- Alpha Tau Omega 2016 – Present
  - Executive Board (Risk Manager)
  - Judicial Board member, Brotherly Relations Officer 2018 – Present