

# NADER ESMAEL

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## SKILLS

Python (Numpy, Pandas, Scikit-learn, Matplotlib, Seaborn, Tensorflow), PostgreSQL, PySpark (DataBricks), R, Tableau, Cloud-Based Services (AWS, BigQuery - Google Analytics), Statistical Modeling, Machine Learning (Logistic Regression, Classification, Neural Networks, NLP, Decision Trees/Random Forests, XGBoost), Microsoft Office/Excel

## PROJECTS

### Pitch Classification and Baseball | Solo Concept Project

- Evaluated umpire's efficiency in officiating games by predicting pitch call's accuracy, using a Random Forest classifier, player's pitch history, and game mechanics
- Utilized pybaseball (third-party Pythonic library) to collect five seasons (4 million rows) of pitch data and organized it into a workable dataframe and feature engineered pitchers by determining a pitcher's repertoire percentage usage
- Determined the importance of speed, rotations, pitch start and end locations, and pitch type in predicting an umpire's pitch call

### Depression or Shower Thoughts: that is the question | Solo Concept Project

- Extracted, transformed, and loaded (ETL) 20,000 Reddit posts using Pushift API and designed an NLP-based Random Forest classifier that differentiates if a post is a random thought or exhibits signs of depression
- Investigated r/depression and r/showerthoughts subreddits to understand the connection between language and behavior, focusing on its significance in detecting signs of depression
- Utilized the model's coefficient to determine commonly ignored keywords that leads to the misclassification of depression

### It's Kiva Time | Team-Based Project

- Collaborated with a team to predict funding trends and churns on microloans by evaluating factors such as loan amount, country, borrower's gender, etc. using a multitude of models (GLM Poisson, Random Forest, Regression, etc.)
- Individually responsible for managing the Github repository, creating EDA and data visualizations, and executing high-processing models

## WORK EXPERIENCE

### **Harvey & Company LLC**

Newport Beach, CA

*M & A Research Analyst*

*March 2019 - January 2020*

- Increased top-line revenue to 400% by developing strategic search queries and research tactics for over 10 platforms
- Improved research efficiency for interns and analysts to determine proper fits by examining company financials, services, size/employee count and aligning the numbers to client portfolios
- Created marketing materials and finance reports for bi-weekly meetings with executives and management teams to go over research efforts and other necessary information regarding possible mergers to further close the deal process

### **Cal Poly Pomona Associated Student, Inc.**

Pomona, CA

*Conference & Events Student Assistant*

*August 2017 - August 2018*

- Supervised and trained six other team members including safety training, operation management, and time allocation
- Supported management through identifying process improvements and position the business for growth potential

### **Filipino Basketball League (FBL)**

Moreno Valley, CA

*Statistician*

*June 2014 - June 2018*

- Achieved 20% increase in profits through fundraisers, promotions, food sales, and maintaining strong client relations to teams and sponsors all over Moreno Valley
- Managed, recorded and visualized real-time basketball metrics to effectively present same-day tournament statistics accessible for players and fans

## EDUCATION

General Assembly

Los Angeles, CA

*Data Science Immersive*

*September 2020 - December 2020*

California State Polytechnic, University (Pomona)

Pomona, CA

*Applied Mathematics & Statistics*

*September 2014 - June 2018*

- Datafest 2018 (Data Dudes) - High Ranking Participant
- President & Founder of Sportsfest Club (2016-17)
- Athletics Chair of Barkada (2016-17)
- Internal Affairs Director of PASK (2015-2016)