

# **Education**

- **Brigham Young University** 
  - Master of Science in Statistics ٠
  - GPA: 4.0 ٠
  - Graduation: April 2021 ٠

### **Work Experience**

- Healthcare Research Assistant, BYU
  - Used SQL and R to retrieve and clean data on emergency room visits at Intermountain ٠ Healthcare
  - Formulated a statistical model utilizing various correlation structures to predict which populations may be at risk of visiting the emergency room unnecessarily
- Data Science in Sports TA, BYU
  - *August 2020 December 2020* Worked with students in their sports projects through the entire data science process, ٠ collecting data, performing an exploratory data analysis, fitting an appropriate model, and creating product that allows a non-technical audience to understand their results
- Data Science Intern, UnitedHealth Group
  - Gathered and cleaned data from a large healthcare database using SQL and R
  - Fit machine learning and statistical models to explain the variation in provider treatment to patients with chronic conditions
  - Presented findings to both a technical audience and company leaders ٠
- Applied R Programming TA, BYU
  - Designed fun and relevant Monte Carlo simulation studies in R twice per semester to be used in reviews and on exams
  - Debugged and graded R scripts for 15 students per week to provide feedback on how to write cleaner code
- Energy Market Analyst Intern, Energy Exemplar
  - Worked closely with prospective clients to formulate their database to work with the company's optimization software
  - Provided prompt feedback to developers on whether code changes had their intended effects and how those changes affected the overall user experience
  - Co-wrote 20 technical comparison documents used to help the company makes decisions on ٠ which product features to keep after a merger
- Data Analytics Research Intern, BYU Tennis Team January 2018 - April 2018
  - Collected data in Excel on over 1000 tennis points to give feedback and analysis to the BYU Men's and Women's Tennis Teams
  - Performed a statistical study in R on whether the BYU Women's Tennis Team played better or worse in "clutch" situations

August 2016 - Present

October 2019 – Present

- **Undergraduate Major: Statistics**
- Undergraduate Minor: Math

June 2020 – August 2020

September 2018 – December 2019

May 2018 - August 2019

#### Skills

- Proficient in R, SQL
- Working Knowledge of Python, SAS, Stan, C++, JMP
- R Shiny
- Some Experience Working in a Linux Environment
- Spanish

#### Interests

- Baseball Sabermetrics
- Healthcare Research
- Bayesian Statistics
- Data Visualization
- Musical Theater

#### Awards

- Part of Winning Team for Domo/Weave 2020 Case Competition
- 2020 Most Outstanding Graduate Student- BYU Statistics Program

## **Shiny Apps**

- Baseball Scouting App
- Baseball Game Simulator
- Astros Banging Scheme Visualizations

### **Data Science Projects**

- Finding Democratic Primary Lanes Using Correlations in Debate Word Counts
- Predict Ball-In-Play Outcomes Using Ordinal Logistic Regression
- Using Hierarchical Bayesian Logistic Regression to Assess the Impact Catchers and Umpires Have on the Probability that a Pitch is Called a Strike
- Distributional Clustering: The Key to Grouping Baseball Players

# **Effectively Wild Research Topics**

- Episode 1523- Most consecutive years with different opening day starter at a single position
- Episode 1524- Most consecutive years with the same opening day starter at a single position
- <u>Episode 1541</u>- Winning pitcher giving up more Earned Runs than losing pitcher
- <u>Episode 1541</u>- Hit in every at bat in debut and last game
- Episode 1553- Players with World Series rings without playing in the World Series
- Episode 1575- Most Batters in an inning without a hit
- Episode 1579- Team vs. team winning streaks
- Episode 1580- Combined Half No-Hitters
- <u>Episode 1584</u>- Matching scores on the same day
- <u>Episode 1587</u>- Same Lineup spot for the entire season
- Episode 1594- Highest percentage of losses with blown leads
- Episode 1600- Biggest difference in height between opposing starting pitchers
- Episode 1612- Players with Home Runs from every lineup spot
- <u>Episode 1616</u>- Combinations with the most putouts
- Episode 1623- Most seasons by two overlapping players
- Episode 1631- Player with most seasons without playing for the same team