

# David Teuscher

DATA SCIENCE CO-OP AT ANCESTRY

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## Education

### Brigham Young University (GPA: 3.83)

Provo, UT

MS IN STATISTICS, BS IN STATISTICS WITH EMPHASIS IN APPLIED STATISTICS AND ANALYTICS

Sep. 2016 - Aug. 2022

- Relevant Courses: Linear Models, Advanced Bayesian Methods, Statistical Computation, Analysis of Correlated Data, Generalized Linear Models, Mixed Model Methods, Multivariate Statistical Methods, Data Science in Sports, Text Processing and Analysis

### Brigham Young University

Provo, UT

BA IN RUSSIAN

Sep. 2016 - Aug. 2022

- Relevant Courses (taught in Russian): Data Science, Fundamentals of Science and Engineering, 19th and 20th Century Russian Literature

## Experience

### Data Science Intern

Lehi, UT

ANCESTRY

Jan. 2022-Present

- Develop a hierarchical model to predict head of household and relationship to the head of household for early census records (pre 1900)
- Extract and create features from early census records to improve model performance
- Optimize feature engineering and model fitting to run at scale for an entire census (approximately 20-40 million records)

### Research Assistant: Bayesian, Spatial Neural Networks

Provo, UT

BRIGHAM YOUNG UNIVERSITY - DR. MATTHEW HEATON

May 2020 - Present

- Compare predictive ability of models using statistical methods against neural nets for non-linear relationships
- Implement an artificial neural net to predict irrigation zones based on simple to measure factors, such as field topography, elevation and past crop yields
- Estimate model parameters, including neural net weights and biases via Markov chain Monte Carlo sampling

### Data Science Team Leader

Provo, UT

BRIGHAM YOUNG UNIVERSITY

May 2020 - Dec. 2020

- Explain data science concepts to students such as data cleaning, feature engineering, model tuning, and model validation
- Lead teams of 3-4 students in machine learning competitions through the Kaggle platform

### Research Assistant: Modeling MLB Player Offensive Performance

Provo, UT

BRIGHAM YOUNG UNIVERSITY - DR. GILBERT FELLINGHAM

Sep. 2018 - Aug. 2020

- Investigate offensive efficiency of MLB players in order to be able evaluate the worth of a player
- Fit polynomial performance curves for players using R and make predictions for player performance over time
- Implementation of various Bayesian nonparametric models to determine which model minimizes prediction error

## Projects

### PITCH FRAMING

2021

- Evaluate the framing ability of MLB catchers using GAMs and generalized linear mixed models

### MODELING MLB PITCHER PERFORMANCE

2021

- Modeled the performance of starting pitchers using ridge regression and the Bayesian paradigm

## Skills

### PROGRAMMING LANGUAGES

- Advanced Proficiency: R, Python, SQL
- Intermediate Proficiency: Scala, SAS, R Shiny
- Novice Proficiency: HTML, CSS, Stata, C++, VBA, Domo, Tableau

### OTHER

- Advanced Mid Russian Fluency (ACTFL certified)
- Member of American Statistical Association (2016-present)
- Member of Mu Sigma Rho Presidency at BYU (2019-2021)