

# JOSEPH K. JENKINS

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## Education History

### **University of Notre Dame, Mendoza College of Business**

MBA – Master of Business Administration

May 2021

MSBA – Master of Science in Business Analytics, *magna cum laude*

May 2020

### **University of Rochester**

BA – Economics, Political Science

May 2018

## Areas of Expertise

### Content

Statistics: Generalized Linear Models, Mixed Effects Models, Text Analysis (e.g., Sentiment Analysis), Supervised and Unsupervised Learning (e.g., Decision Trees)

Visualization: static and interactive, visual inference

Unstructured Data: web scraping, text parsing

Experimental Design

### Programming

Statistical: R (primary), Python (novice), Stata (basic knowledge)

Collaboration/Reporting/Visualization: Git,  $\text{\LaTeX}$ , R Markdown, R/RStudio, R Shiny

Other: SQL

## **Occupational History**

2020–Current: Partner & UX Designer – SafeSeating Solutions

Developed an application that helped athletic teams optimize their stadiums for social distancing; used by Notre Dame Athletics and an MLB team planning for 2021 season

Led the development of the user interface that allows athletic departments to adjust the model's inputs based on feedback from athletic directors and local health officials

2019: Intern – Altair Engineering

Built a weekly sales report with a specific focus on the sale's team application of discounts; recommendations helped the CFO devise a cost-effective discount strategy

Conducted research to identify challenges various departments faced while updating the CRM infrastructure; created presentation and reference materials to help smooth the transition

2018–2019: Associate – Montalbano, Belliveau & St. Sauver LLP

Researched various title instruments to assist attorneys as they evaluated various commercial and residential real estate transactions

Assisted attorneys in the preparation of title reports, commitments for title insurance, and various other legal transactions

2016: Intern – U.S. Senator Sheldon Whitehouse Office

Worked in Senator Whitehouse office, specifically talking with constituents to address their individual needs and directing them to the proper division in the office

Attended the Senator's weekly scheduling meeting and took minutes; also involved in the planning and set-up of various political functions

2012–2016: Camp Counselor – Autism Project of Rhode Island

Supported the specific needs of children with autism to facilitate a camp experience in a safe environment; created customized opportunities that instilled confidence and a sense of community with fellow campers

## **Current Research**

2020–Current: Research Assistant – University of Notre Dame, Mendoza College of Business

Uses convolutional neural networks to generate artificial faces that are presented within a survey design to analyze implicit bias

## **Projects**

November 2020: Team Member – [MLB Strikes Forecasting, University of Notre Dame](#)

Uses data scraped from baseball-reference.com to predict the percentage of strikes expected to be thrown in the 2019 season using game data from the 2009–2018 seasons

The goal of this project is to investigate whether pitching strategies have evolved over this time period and if an accurate strike forecast can be produced

October 2020: [Twitter Presidential Sentiment](#)

Created a shiny application that gets the streaming tweets around central figures in the 2020 election cycle and then runs sentiment analysis using the hash sentiment vader from the lexicon R package

2019–2020: Project Manager – MSBA Capstone Project, University of Notre Dame

Led a five-person team that built a proof of concept application that was presented to upper management at an industry-leading transportation lease financing firm

Developed a machine learning model that estimated repair and labor hours across eight facilities and over 300 categorical variables; model trained on a dataset with 20,000 entries

April 2020: Team Leader – [College Basketball Team Matcher, University of Notre Dame](#)  
 Led a three-person team that built a k-nearest neighbors matrix (K-NN) for NCAA teams (over 4200 teams and 45 statistical categories); project identifies statistically similar teams

March 2020: Developer – [Rhode Island Covid-19](#)  
 Developed ricoronainfo.org to provide historical data on COVID-19 in Rhode Island; website runs on AWS and uses data from the RI Department of Health that was updated daily

February 2020: [Glassdoor Analysis](#)  
 Analyzes Glassdoor reviews and performs sentiment analysis, as well as topic analysis, and investigates whether we can use sentiment analysis to predict glass door ratings

January 2020: [Earnings Call Analysis Analysis](#)  
 Uses stock data from the Alpha Vantage API and the Loughran-McDonald lexicon to run sentiment analysis on quarterly earnings calls. The project seeks to see if any price change patterns arise depending on whether the cal had a positive or negative sentiment

November 2019: [U.S. Flight Analysis, University of Notre Dame](#)  
 Examined U.S. airport and flight statistics in Python and utilized Pandas, NumPy, Matplotlib, and Pyplot to identify time-series trends within the industry such as delays, cancellations, and the busiest times to fly

## **Conference Presentation**

Jenkins, J. K., Spahn, A. K., Gilgenbach, E. J. (2020, June). Clustering NCAA Basketball Teams. Presented at the Virtual Carolina Sports Analytics Meeting (CSAM), Wilmington, NC.

## **Teaching Experience**

Workshops: University of Notre Dame  
[Introduction to R Shiny](#)

## **Media Exposure**

*Finding A Seat: 2 Business Profs And A Grad Student Built An App To Help Sports Venues With Physical Distancing*, Jackson M., ND Works

*Inside Notre Dame's analytics heavy solution to socially distancing its stadium*, Sampson P., The Athletic

## **Honors and Awards**

Dean's Award Recipient University of Notre Dame, Mendoza College of Business – May 2020  
 King's Medal Award Recipient St. Andrew's School – June 2014

## **Extracurricular**

Member - Michiana R Users Group (MRUG)  
 Member - Toastmasters International  
 Member - MBA Business Analytics Club