

# MATTHEW KAYE

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🐙 mrkaye97

## EXPERIENCE

### Data Scientist

#### CollegeVine

📅 Sept 2020 – Present

📍 Cambridge, MA

- First member of the CollegeVine data science team. Responsible for establishing data science workflow best practices and providing easy-to-use data science tools and understandable explanations of data scientific concepts to other members of the team
- Clustered users with a modified K-Prototypes algorithm to allow for missing values in the distance calculation
- Advised on CollegeVine survey conducting and analyzed results for use in published reports on college admissions
- Serving as a subject matter expert for everyday statistics- and data science-related questions

### Baseball Operations Fellow

#### Baltimore Orioles

📅 Mar 2020 – Sept 2020

📍 Baltimore, MD

- Created a fully Bayesian, simulation-based projection system for MLB player performance over a six year time horizon
- Created an Gradient Boosting- and simulation-based projection system for a minor league player's MLB performance
- Created a gamma hurdle regression framework to predict free agent salaries
- Implemented a robust-to-multimodality version of the Metropolis-Hastings algorithm to determine the optimal way to position our defense against a specific hitter
- Worked on a variety of day-to-day data science tasks related to game strategy and player evaluation

### Research Intern

#### Federal Reserve Bank of St. Louis

📅 June 2019 – Aug 2019

📍 St. Louis, MO

- Prepared new data series from the BLS, IMF, and more for upload to FRED, using pandas for data wrangling
- Fit neural network and multinomial naïve Bayes models to apply correct descriptive tags to FRED series to improve search performance

### Econometrics Teaching Assistant

#### Carleton College Department of Economics

📅 Mar 2019 – June 2019

📍 Northfield, MN

- Ran semiweekly sessions to help econometrics students master course material, improve their R and  $\text{\LaTeX}$  skills, and hone their statistical intuitions
- Helped students complete homework assignments and projects and prepare for exams
- Graded homework assignments

## SKILLS

### Languages:

Haskell

Java

Python

R

SQL

### Frameworks, Software, and Tools:

AWS

brms

caret

Docker

Excel

Git

Heroku

Numpy

Pandas

R Shiny

Scikit-Learn

Tidyverse

### Data Science:

Bayesian Modeling and Inference

Data Wrangling

Data Visualization

Machine Learning

Statistical Inference

Time Series Modeling

## LANGUAGES

English

● ● ● ● ●

Spanish

● ● ● ● ●

Swedish

● ● ● ● ●

## EDUCATION

### B.A. Economics and Mathematics

#### Carleton College

📅 Sept 2016 – Nov 2019

Economics Thesis: *The Effect of Transit on Life Satisfaction: A Multilevel Modeling Exploration of Urban Happiness*

Mathematics Capstone: *Dynamic Linear Models and the Kalman Filter*

#### Choate Rosemary Hall

📅 Sept 2013 – June 2016

## INTERESTS

Baseball

Browsing r/AskReddit

Cooking

Running

Minimalism

Skiing

Data Visualization

Fantasy Novels

Solo Travel

Nature & Architecture Photography