

# Ethan Singer

[singerep@bu.edu](mailto:singerep@bu.edu) – (301) 310-7790 - [ethan-singer.com](http://ethan-singer.com)

## EDUCATION

**Boston University, Boston, Massachusetts**

**May 2024 (Expected)**

B.A. in Statistics and Computer Science, Minor in Public Policy Analysis

Relevant courses: Multivariate Calculus, Basic Statistics and Probability, Introduction to Computer Science I and II

## WORK EXPERIENCE

**Research Intern, BU Spark!**

**June 2021 – present**

Conduct research on projects related to affordable housing, media coverage of state's COVID re-opening plan in immigrant communities, and national eviction rates. Analyze Census, HUD, and numerous other proprietary datasets constructed through web scraping and other techniques.

**Associate Quantitative Analyst, Philadelphia Phillies**

**June 2021 – present**

Develop new metrics to evaluate historical player performance by employing machine learning tools (tensorflow, MLflow) and complex probability models. Conduct extensive validation testing and create data visualizations to share findings.

**Data Researcher Intern, Advocates for Minor Leaguers**

**May 2020 – February 2021**

Predicted the cost of a minimum wage increase for over 10,000 Minor League Baseball players using regression modeling and other statistical techniques. Built, and currently manage, extensive player information databases using PyBaseball. Create visualizations in R, Tableau, and matplotlib to evaluate and compare MLB Draft classes.

## INDEPENDENT RESEARCH PROJECTS

**Umpire Scorecards**

**August 2020 - present**

Conceived and developed popular online platform UmpScorecards ([@UmpScorecards](https://@UmpScorecards) and [umpscorecards.com](https://umpscorecards.com)) to assess the performance of Major League Baseball umpires. Utilized advanced statistical models, Monte Carlo simulations, and complex geometry to generate graphical scorecards evaluating umpire accuracy. Automated platform activity using MLB and Twitter APIs. Featured in Bleacher Report, NBC Sports, LA Daily News, and other media outlets. Currently over 100,000 followers.

**COVID-19 Deaths and the 2020 Election**

**December 2020 - January 2021**

Used CDC, Census, and county level voting data to estimate votes lost due to COVID-19 deaths in the 2020 presidential election. Built models to predict the partisanship of COVID-19 deaths across the country. Estimated that the pandemic cost the Trump campaign approximately 80,000 votes. Build interactive map for users to explore data using d3.js.

**Race and Marijuana Arrests**

**July 2020 - September 2020**

Studied racial disparities in the criminal justice system. Used NYPD historical arrest records to analyze inter-neighborhood marijuana arrest rates. Found racial disparities in arrest rates in 82% of census tracts. Cross-referenced NYPD data with tract information to predict neighborhood level marijuana arrests, controlling for tract characteristics such as urbanity and demography.

## SKILLS

Python, R, Java, JS, sql, HTML/CSS, d3.js, Docker, Git