

# Robert C. Garrett

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Statistics Student

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## EDUCATION

*Miami University Oxford, OH*

Graduating May 2019

B.S. in Mathematics & Statistics, Co-major in Predictive Analytics.

Minor in Computer Science.

### *Statistics Courses*

Statistical Modeling, Probability, Regression Analysis, Statistical Programming, Statistical Learning, Data Visualization, Inferential Statistics, Time Series, Bayesian Statistics, Statistical Consulting.

### *Mathematics Courses*

Calculus 1-3, Linear Algebra, Differential Equations, Abstract Algebra, Real Analysis, Numerical Analysis, Optimization.

### *Computer Science Courses*

Data Structures, Database Systems, Algorithms, Artificial Intelligence.

GPA All Undergraduate and Graduate Courses: 3.9

GPA Mathematics and Statistics Courses; 3.86

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## FIELD EXPERIENCE

*Cincinnati Children's Hospital* Department of Biostatistics and Epidemiology

May 2018-Present

Pediatric Obesity Weight Evaluation Registry (POWER)

Aggregated and visualized quarterly data on the progress of Pediatric Obesity patients at 30+ hospitals in the US

Working to evaluate the effect of latitude on Vitamin D deficiencies in Pediatric Obesity patients

Cincinnati Childhood Allergy and Air Pollution Study (CCAAPS)

Working to compare the effectiveness and efficiency of Voronoi diagrams vs. square rasters in interpolating Land Use Random Forest predictions over the Greater Cincinnati area

*IBM Research Triangle Park, NC*

May 2017-May 2018

Integrated cognitive tools including Watson Machine Learning, SPSS modeler, and R into blockchain networks in order to provide real-time analysis to users

*Miami University* Undergraduate Associate

January 2018-Present

As part of the Undergraduate Associate program, I have assisted the following professors with teaching statistical methods and programming languages as well as holding office hours:

STA 467: Statistical Learning *Dr. Karsten Maurer*

STA 462: Inferential Statistics *Dr. Tatjana Miljkovic*

STA 363: Intro to Statistical Modeling *Michael R. Hughes*

## RESEARCH EXPERIENCE

*Government Section on Statistics Data Challenge American Statistical Association*

2018 Joint Statistical Meetings, *Co-author on Second Place team*

Created tools for the second place-winning Miami University team to visualize errors associated with interpolating weather forecasts across the continental United States

Presented my own data-centric model for evaluating error in weather forecasts, which did not place in the competition

2017 Joint Statistical Meetings, *Presenter and Third Place winner*

Utilized BLS data to analyze consumer expenditures throughout the Great Recession and predict future budgeting habits

2016 Joint Statistical Meetings, *Team Member*

Scraped crash safety rating data from NHTSA and IIHS to create a database for the project

*ASA DataFest*

2018 Miami University, *First Place*

Merged Indeed.com and US Census data to visualize labor surplus/deficit in the technology sector using Voronoi diagram heatmaps

2017 Miami University, *Third Place*

Worked with Expedia data to identify behavior corresponding to users who ultimately book a trip rather than just browse the website

2016 Miami University, *First Place*

Manipulated and visualized 3GB of Ticketmaster data to create an ad suggestion algorithm

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## PUBLICATIONS

### Papers

*An analysis of crash-safety ratings and the true assessment of injuries by vehicle* Computational Statistics, (accepted based on a satisfactory minor revision)

Garrett, R. C. and Fisher, T. J.. 2017. An Analysis of Consumer Budgeting and the Great Recession. In 2017 JSM Proceedings. Alexandria, VA: American Statistical Association.

### R packages

Robert C. Garrett, Austin Nar, Thomas J. Fisher, Karsten Maurer. 2018. ggvoronoi: Voronoi Diagrams and Heatmaps with 'ggplot2'. R package version 0.8.1. <https://CRAN.R-project.org/package=ggvoronoi>

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## AWARDS AND HONORS

University Academic Scholars Program, Mathematics and Statistics Division (2015-2018)

Dr. Donald C Weber Memorial Scholarship (2017 and 2018)

Eric E Erickson Memorial Scholarship (2018)

EY scholarship (2017)

President's List (Fall 16, Spring 17, Fall 17)

Dean's List (Fall 15, Spring 16, Spring 18)