

# Luke Benz

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## EDUCATION

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### Yale University

B.S. Applied Mathematics

2015-2019

GPA: 3.97/4.00

- Phi Beta Kappa (Early Selection, Fall 2018)
- Summa Cum Laude

## EXPERIENCE

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### Medidata Solutions—*New York, NY*

August 2019 - Present

#### *Statistical Analyst/Data Scientist*

- Develop models to select sites for clinical trials and forecast enrollment and major milestones over the duration of the study.
- Built survival models to predict patient dropout and research factors associated with dropout in Alzheimer's Disease clinical trials.
- Designed Python data pipeline for identifying various data transformations necessary to standardize and combine data across clinical trials.
- Maintain and develop NLP model to perform value level standardization of clinical data utilizing reinforcement learning techniques.

### Yale School of Public Health—*New Haven, CT*

June 2016 - May 2019

#### *Biostatistics Research Assistant*

- Research assistant for Elizabeth Claus MD, PhD
- Analyzed quality of life data for cancer patients with meningioma and low-grade glioma.
- Managed the recruitment and enrollment for the International Low Grade Glioma Registry.

### National Institute of Standards and Technology—*Gaithersburg, MD*    Summers 2017 and 2018 *Summer Undergraduate Research Fellow*

- Research fellow in Information Technology Lab Statistical Engineering Division for Dr. Antonio Possolo (2018) and Dr. Andrew Rukhin (2017).
- Built NIST Homogeneity Assessor (NIHOMA), an R Shiny web application for exploring homogeneity of candidate reference materials using linear, Gaussian random effects model.
- Explored techniques for estimating heterogeneity variances in order to improve methods for combining results in collaborative studies with unreliable reported uncertainties.

## PUBLICATIONS

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Claus, E., Feliciano, J. **Benz, L.**, Calvocoressi, L. "Social media partnerships with patient organizations for neuro-oncology patient recruitment." *Neuro-Oncology Practice*. (2019) **Link**

**Benz, L.S.**, Wensch, M.R., Schildkraut, J.M., Bondy, M.L., Warren, J.L., Wiemels, J.L. and Claus, E.B. (2017), Quality of life after surgery for intracranial meningioma. *Cancer*, 124: 161-166. **Link**

## PRESENTATIONS

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**Benz, Luke** “An Examination of Timeout Value, Strategy, and Momentum in NCAA Division 1 Men’s Basketball.” Plenary talk presented at *Electronic Undergraduate Statistics Research Conference*. (November, 2019).

**Benz, Luke** “An Examination of Timeout Value, Strategy, and Momentum in NCAA Division 1 Men’s Basketball.” Poster presented at *New England Symposium of Statistics in Sports*. Harvard University, Cambridge, MA (September, 2019).

**Benz, L.**, Senders, J., Wefel, J., and Claus, E. “The International Low Grade Glioma Registry Patient-Reported Quality of Life.” Poster presented at *Society for Neuro-Oncology Annual Scientific Meeting*, New Orleans, LA (October, 2018).

## SKILLS

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**Programming Languages and Frameworks** R, Python, SQL, C, R/Shiny, L<sup>A</sup>T<sub>E</sub>X

## SOFTWARE

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**ncaahoopR** An R package for working with NCAA Basketball Play-by-Play Data.  
<https://github.com/lbenz730/ncaahoopR>

## AWARDS AND HONORS

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**Undergraduate Statistics Project Competition**, American Statistical Association *Spring 2019*  
First place research project for senior thesis, “An Examination of Timeout Value, Strategy, and Momentum in NCAA Division 1 Men’s Basketball.”

**Statsketball Contest**, American Statistical Association *April 2018*  
Build Your Own Bracket Draft Challenge 2018 College Winner

**George J. Schulz Fellowship for the Natural Sciences**, Yale University *Summer 2016*

**Michael Manzela Fellowship Supporting Cancer Research**, Yale University *Summer 2016*