

# ZHE ZHAO

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## RESEARCH STATEMENT

My research interests include applying statistical methods on analysis of large-scale electronic health Records data, Bayesian methods on astronomy and computational algorithms in statistical inference.

## EDUCATION

**2019 – 2021 (expected), University of Michigan**  
M.S. in Applied Statistics

**2014-2018, Boston University**  
B.A. in Statistics  
B.A. in Economics

## AWARDS

**Fall 2016 – Spring 2018, Undergraduate (Boston University)**  
Dean's List (3.5 GPA or higher, all semesters)

## PUBLICATION

### *Journal Articles*

Tapper EB, Aberasturi D, Zhao Z, Hsu C-Y, Parikh ND. Outcomes after hepatic encephalopathy in population-based cohorts of patients with cirrhosis. *Aliment Pharmacol Ther.* 2020; **51**: 1397– 1405.  
[\[AP&T\]](#)

## ACADEMIC EXPERIENCE

**2020 – present, University of Michigan (Michigan, USA)**  
*Data Analyst, Jan 2020 – present*

Working on understanding the outcomes for patients with decompensated cirrhosis or at risk for hepatic encephalopathy with Dr. Elliot Tapper. Developing and applying statistical approaches for analysis for large-scale Medicare data by using R and SAS.

*Research Assistant, May 2020 – present*

Implementing Bayesian neural networks for astronomical catalogs from images and optimizing the speed of models by using python under pytorch-lightning framework. Developing hyperparameter training using python under Optuna framework. The project is supervised by Dr. Jeffrey Regier.

## WORK EXPERIENCE

**2019, China House (Beijing, China)**

*Course Assistant, Team Leader, Jan 2019 – June 2019*

Helped undergraduate and high school student conduct researches on Sino-African relations. Primarily responsible for organizing interview with Chinese workers in Africa, leading group discussions, teaching basic data analysis skills and collecting interview data.

**2018, Ignite Health (previously Affect Health, Boston, USA)**

*Data Analyst Internship, July 2018 – Dec 2018*

Worked on understanding risk-adjustment in quality metrics adopted by MassHealth for healthcare providers. Researched and completed a report on mobile health market using web crawling and data visualization with python and R. Collected and organized data on potential donors for fundraising campaign.

**ADDITIONAL SKILLS**

**Technical Skills**

R (data.table, tidyr, R-markdown), Python (PyTorch, PyTorch-Lightning, Numpy), SAS, Stata, LaTeX and Git (Github, Gitlab). Working experience with Anaconda.

**Soft Skills**

Strong interpersonal skill, quick learner, problem solver, and team-player

**Language**

Mandarin, native; English, fluent