






# MEGHA JOSHI

Experienced statistician with strong background and interest in causal inference and meta-analysis. I have seven years of experience in managing and leading research projects, developing analytic strategy, analyzing large, complex datasets, and communicating results effectively.






## EDUCATION

- 2021 • **The University of Texas at Austin**  
PhD in Quantitative Methods  Austin, TX
- Advisors: Dr. Tasha Beretvas and Dr. James E. Pustejovsky
- Thesis: Cluster wild bootstrapping to handle dependent effect sizes in meta-analysis with small number of studies
- 2014 • **Bryn Mawr College**  
BA in Art History and Psychology  Bryn Mawr, PA

## WORK EXPERIENCE

- 2021 | Present • **Quantitative Researcher**  
American Institutes for Research  Austin, TX
- Develop methodological strategies for projects using causal inference and meta-analysis. Conduct the analyses.
  - Clean and merge data with millions of rows.
  - Create a [Shiny app](#) for users to run meta-analyses and plot research evidence gaps.
- 2021 • **Data Scientist**  
Analyst Institute  Austin, TX
- Developed the codebase infrastructure to conduct inferential analysis on data with over a hundred million rows and data with complex structures.
  - Designed the methodological and analytical strategy to conduct the inferential analysis.
  - Solved methods related issues such as selecting appropriate cluster robust variance estimator, and estimating marginal causal effects.
- 2021 • **Statistical Consultant**  
Freelance  Austin, TX
- Executed a meta-analysis examining the extent of bias in analyses of quasi-experimental designs that have different study characteristics.
  - Implemented code to run meta-analytic models accounting for complex data structures.
  - Produced graphs and tables displaying the results.

## CONTACT INFO

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 [meghapsimatrix.com](https://meghapsimatrix.com)  
 [github.com/meghapsimatrix](https://github.com/meghapsimatrix)  
 469-235-3003  
 Austin, Texas  
For more information, please contact me via email.

## SKILLS

Statistical Software: R, Python  
Version Control: Git  
Project Management: Asana, Trello

## RESEARCH INTERESTS

Causal inference  
Meta-analysis  
Machine learning

## R PACKAGES

[wildmeta 0.2.0](#)  
[simhelpers 0.1.2](#)

*This resume was made with the R package [pagedown](#).*

*Last updated on 2022-06-29.*

2016  
|  
2021

### Graduate Research Assistant

The University of Texas at Austin

📍 Austin, TX

- Led the methods team for a project examining the effects of teacher preparation programs on teacher retention in Texas.
- Evaluated the impact of a college preparatory program using propensity score analysis with generalized boosted modeling.
- Integrated large relational datasets.
- Developed and implemented the analytical strategy.
- Produced reports and presentations detailing the results to be presented to a non-technical audience.



## TEACHING EXPERIENCE

2015  
|  
2021

### Graduate Teaching Assistant

The University of Texas at Austin

📍 Austin, TX

- Assisted in the following courses: Causal Inference; Data Analysis, Simulation and Programming in R; Research Design; Survey of Multivariate Methods; Fundamental Statistics; and Statistics in Market Analysis.
- Led weekly problem-solving sessions through office hours; effectively communicated complex statistical methods to students; and, fostered interest in methodological research.



## PUBLICATIONS AND TECHNICAL PAPERS

2022

### Cluster wild bootstrapping to handle dependent effect sizes in meta-analysis with a small number of studies

*Research Synthesis Methods*

Joshi, M., Pustejovsky, J. E., & Beretvas, S. N.

2019

### Direct ties to a faculty mentor related to positive outcomes for undergraduate researchers

*BioScience*, Volume 69, Issue 5, Pages 389–397

Joshi, M., Aikens, M. L., & Dolan, E. L.

2019

### The performance of multivariate methods for two-group comparisons with small samples and incomplete data

*Multivariate Behavioral Research*, Pages 1-18

Pituch, K. A., Joshi, M., Cain, M. E., Whittaker, T. A., Chang, W., Park, R., & McDougall, G. J.

2019

### Evaluating the Transition to College Mathematics course in Texas high schools: Findings from the first year of implementation

*Greater Texas Foundation*

Pustejovsky, J. E., & Joshi, M.