

# J. BRANDON CARTER

Department of Statistics and Data Sciences ◊ University of Texas at Austin  
105 E 24th St D9800, Austin, TX 78712 ◊ 509 · 389 · 6837 ◊ carterjb@utexas.edu

## EDUCATION

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### The University of Texas at Austin

Austin, TX

PhD in Statistics, December 2024

Advisor: Catherine Calder

Dissertation: Bayesian Spatial Models for Discrete Data: Methodological Advances with Applications in Urban Sociology

### Brigham Young University

Provo, UT

MS in Statistics, April 2019

Advisor: David B. Dahl

BS in Statistics, Magna Cum Laude, April 2019

Minors: Mathematics, World Dance

Speaker at College Graduation

## RESEARCH INTERESTS

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### Methodological

Spatial and Spatio-temporal Statistics, Probabilistic Graphical Models, Bayesian Modeling and Computation

### Applied

Social Science, Environmental Science

## EXPERIENCE

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### The University of Texas at Austin

Austin, TX

Assistant Instructor, January 2023 - May 2023

Teaching Assistant, August 2022 - December 2022

Graduate Research Assistant, August 2020 - May 2022

### Brigham Young University

Provo, UT

Research Assistant, August 2016 - April 2019

Teaching Assistant, August 2015 - April 2017

## AWARDS AND HONORS

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ISBA Travel Award, 2024

Keller Award for leadership, service and community building, Department of Statistics and Data Sciences, The University of Texas at Austin, 2024

Professional Development Travel Award, College of Natural Sciences, The University of Texas at Austin, 2023

SDS Excellence Fellowship, 2 year, Department of Statistics and Data Sciences, The University of Texas at Austin

Academic scholarship, full tuition, Brigham Young University, August 2015 - April 2019

Mary B. Jensen Scholarship, full tuition, Brigham Young University, August 2018 - April 2019

Viltis Scholarship, half tuition, Brigham Young University, August 2017 - April 2018

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## PUBLICATIONS

### Submitted/Under Review

**J. B. Carter** and C. A. Calder (2024). *Mixture of Directed Graphical Models for Discrete Spatial Random Fields*. arXiv: 2406.15700 [stat.ME]

### Refereed Publications

**J. B. Carter**, C. R. Browning, B. Boettner, N. Pinchak, and C. A. Calder (2024). Land-use filtering for nonstationary spatial prediction of collective efficacy in an urban environment. *The Annals of Applied Statistics* 18.1, pp. 794–818 [link]

D. B. Dahl, J. Andros, and **J. B. Carter** (2023). Cluster analysis via random partition distributions. *Statistical Analysis and Data Mining: The ASA Data Science Journal* 16.2, pp. 135–148 [link]

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## PRESENTATIONS

### Invited Talks

*Data Jamboree: Web Scraping in Julia*  
ASA Computing Section Mini-Symposium, Online, November 2024

*Land-use Filtering for Nonstationary Spatial Prediction of Collective Efficacy in an Urban Environment*  
CMStatistics 2022, London, UK, December 2022

### Posters/Contributed Talks

*Mixture of Directed Graphical Models for Discrete Spatial Random Fields*  
JSM 2024, Portland, OR, August 2024

*Mixture of Directed Graphical Models for Discrete Spatial Random Fields*  
ISBA World Meeting 2024, Venice, IT, July 2024

*Land-use Filtering for Nonstationary Spatial Prediction of Collective Efficacy in an Urban Environment*  
JSM 2023, Toronto, CA, August 2023

*Land-use Filtering for Nonstationary Spatial Prediction of Collective Efficacy in an Urban Environment*  
ENVR 2022 Workshop, Provo, UT, October 2022

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## TEACHING

### The University of Texas at Austin

Austin, TX

Assistant Instructor, SDS 320E Elements of Statistics, Spring 2023

Teaching Assistant, SDS 322E Elements of Data Science, Fall 2022

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## SERVICE

**The University of Texas at Austin**

Austin, TX

Dean's Office Graduate Council, January 2021 - December 2024

Department Representative, Graduate Student Assembly, August 2020 - May 2022

**PROFESSIONAL MEMBERSHIP**

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American Statistical Association (ASA)

International Society of Bayesian Analysis (ISBA)