

# Connor Brubaker

College Station, TX

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## Summary

Ph.D. candidate in statistics with expertise in time series analysis, spatial statistics, and machine learning and strong proficiency in R and Python. Thrives in interdisciplinary collaborative environments aimed at solving complex problems and seeks a role in designing well-crafted statistical solutions for automation and discovery.

## Education

<b>Texas A&amp;M University</b> <i>Ph.D. in Statistics</i>	<b>College Station, Texas</b> 2025
<b>The University of Texas at Austin</b> <i>B.S. in Mathematics</i>	<b>Austin, Texas</b> 2019

## Experience

<b>Liberty Mutual Insurance</b> <i>Data Science Intern</i>	<b>Boston, MA</b> Jun. 2022 - Aug. 2022
<ul style="list-style-type: none"><li>○ Restructured and performed morphological and syntactic analysis on large, annotated text corpora using R and Python.</li><li>○ Designed and validated hierarchical machine learning models based on transformers for automatic underwriting risk segmentation.</li></ul>	
<b>Applied Research Laboratories</b> <i>Engineering Research Associate</i>	<b>Austin, TX</b> Dec. 2019 - Jul. 2020
<ul style="list-style-type: none"><li>○ Implemented deep learning models for online object-tracking in sonar images using transfer learning.</li><li>○ Developed and trained convolutional neural network-based models for dimensionality reduction and clustering of image data.</li><li>○ Developed educational materials for an internal course on machine learning.</li></ul>	
<b>Alerian</b> <i>Data Intern</i>	<b>Dallas, TX</b> May 2019 - Aug. 2019
<ul style="list-style-type: none"><li>○ Developed automated reporting and backtesting processes in Visual Basic, enhancing accuracy and significantly reducing time costs.</li><li>○ Applied time series forecasting and causal inference to evaluate the impact of marketing budget changes on website traffic and sales.</li></ul>	

## Publications

Connor Brubaker and Scott Bruce. Time-varying frequency band analysis for multiple nonstationary time series. *In Preparation*, 2025.

Connor Brubaker, Jack Manning, Jennifer Yentes, and Scott Bruce. Frequency band analysis for multiple stationary time series. *In Preparation*, 2024.

Dakota Doucet, Connor Brubaker, Donald Turner, and Carl A Gregory. Factors affecting the role of canonical wnt inhibitor dickkopf-1 in cancer progression. *Frontiers in Oncology*, 13:1114822, 2023.

## Collaborative Projects

<b>Survey Analysis of K-12 Teacher Sentiment Towards AI in Education</b> <i>Collaboration with the Department of Geology &amp; Geophysics at Texas A&amp;M</i>	2024
<b>Automatic Storm Track Identification via Spatiotemporal Regionalization of Weather Data</b> <i>Collaboration with the Department of Atmospheric, Oceanic &amp; Earth Sciences at George Mason University</i>	2024
<b>Quasi-Poisson Regression Analysis of Fly Production Data</b> <i>Collaboration with the Department of Entomology at Texas A&amp;M</i>	2024
<b>Cluster Analysis of EOG Measurements for the Detection of Fatigue</b> <i>Collaboration with the Department of Industrial &amp; Systems Engineering at Texas A&amp;M</i>	2024

## Analysis of Home Range and Ecological Needs of the Western Chicken Turtle

*Collaboration with the Natural Resources Institute at Texas A&M*

2023

## Meta-Analysis on the Link between Tissue Origin and Role of Dkk-1 in Cancer Progression

*Collaboration with the College of Medicine at Texas A&M*

2022

## Teaching

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- Instructor for STAT 211, Principles of Statistics I. Spring 2022.
- Instructor for STAT 302, Statistical Methods. Fall 2021.
- TA for STAT 673, Time Series Analysis I. Fall 2024.
- TA for STAT 652, Statistics in Research II. Summer 2021.
- TA for STAT 611, Theory of Statistical Inference. Spring 2021.
- TA for STAT 608, Regression Analysis. Fall 2020.

## Presentations

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### Joint Statistical Meetings 2024

*Contributed Talk*

**Portland, OR**

*August 2024*

### Joint Statistical Meetings 2023

*Contributed Talk*

**Toronto, ON, CA**

*August 2023*

### SRCOS Summer Research Conference

*Poster*

**Waco, TX**

*June 2023*

### SETCASA Poster Competition

*Poster*

**College Station, TX**

*May 2023*

## Awards & Recognition

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### SRCOS Summer Research Conference

*Travel Award*

**Waco, TX**

*2023*

### SETCASA Poster Competition

*Silver Award*

**College Station, TX**

*2023*

### Texas A&M University

*Nominated for College of Science Award for Outstanding Achievement in Graduate Teaching*

**College Station, TX**

*2022*

## Service

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### ASA DataFest at Southern Methodist University

*Guest Lecturer*

**Dallas, TX**

*April 2024*

### Department of Statistics Data Science Summer Camp

*Volunteer Instructor*

**College Station, TX**

*June 2023*

## Professional Organizations

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- American Statistical Association
- International Chinese Statistical Association
- American Guild of Organists

## Skills

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**Software:** R, Python, TensorFlow, PyTorch, C++, SQL, Shell, Git, Docker, AWS

**Statistical:** Time series analysis, regression analysis, spatial statistics, machine learning, natural language processing, cluster analysis, Bayesian methodology, statistical modeling