

Jimmy Hickey

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Education

- 2019-present Ph.D. Statistics
North Carolina State University
- 2019 - 2020 M.S. Statistics
North Carolina State University
- 2014 - 2018 B.S. Computer Science; B.S. Physics; B.A. Mathematics
Winona State University
Minors: Statistics; Data Science

Professional Experience

- 2020 - present Statistical Sciences Technical Intern
Sandia National Laboratories
- Apply statistical methods in spatial statistics, functional data analysis, and machine learning
 - Support a variety of applications including environmental science, engineering, and national defense
- 2019 - present Graduate Student Researcher
Duke Clinical Research Institute
- Develop machine learning methods for time-to-event outcomes with limited data
 - Develop transfer and federated learning methods to address racial disparity in event prediction
- 2020-2022 Lead Consultant
NCSU Statistics in the Community ([projects and reports](#))
- Lead graduate students in pro-bono statistical consulting for local nonprofits
 - Analyze client data through exploratory analysis and predictive modeling and summarize findings into actionable business insights
- 2018 – 2019 Genomic Systems Programmer Analyst
Mayo Clinic
- Develop variant annotation, microbiome, and multiple myeloma fusion detection pipelines for researchers and clinicians
 - Optimize bioinformatics algorithms for parallelization on high performance computing clusters

- 2021-2022 Peer Tutor
 2016 -2018
- Tutor a master's student in mathematical statistics
 - Tutor undergraduates in physics, computer science, and math
- 2016 - 2018 Software Developer
Digi International
- Build firmware for microcontrollers and routing devices

Publications

1. **J Hickey**, J P Williams, E C Hector (2022+). Transfer Learning with Uncertainty Quantification: Random Effect Calibration of Source to Target (RECaST). [[arXiv](#)] In Review
2. C Hong, M Liu, D M Wojdyla, **J Hickey**, M Pencina, R Henao (2023+). Trans-Balance: Reducing Demographic Disparity for Prediction Models in the Presence of Class Imbalance. To appear in *The Journal of Biomedical Informatics*
3. **J Hickey**, R Henao, M Pencina, D M Wojdyla, M Engelhard (2023+). Improving Event Time Prediction by Learning to Partition the Timeline. [[arXiv](#)] In Review
4. **J Hickey**, E C Hector, J P Williams (2023+). Online Bayesian Transfer Learning with Uncertainty Quantification. *In Progress*
5. **J Hickey**, E C Hector, J P Williams, B J Reich (2023+). Bayesian Transfer Learning for Multiple Outcomes. *In Progress*

Professional Presentations

1. Transfer Learning with Uncertainty Quantification: Random Effect Calibration of Source to Target (RECaST). *Joint Statistical Meeting Oral Presentation*. August 2023
2. Transfer Learning with Uncertainty Quantification: Random Effect Calibration of Source to Target (RECaST). *North Carolina State University Graduate Research Symposium Poster Presentation*. April 2023
3. Trans-Balance: Reducing Demographic Disparity for Prediction Models in the Presence of Class Imbalance. *Duke University Oral Presentation*. April 2023
4. Transfer Learning with Uncertainty Quantification: Random Effect Calibration of Source to Target (RECaST). *ENAR Poster Presentation*. March 2023
5. Improving Event Time Prediction by Learning to Partition the Timeline. *Duke University Oral Presentation*. March 2023
6. Improving Event Time Prediction by Learning to Partition the Timeline. *North Carolina State University Oral Seminar*. September 2022
7. Transfer Learning with Uncertainty Quantification: Random Effect Calibration of Source to Target (RECaST). *Joint Statistical Meeting Poster Presentation*. August 2022

Service

- 2023 Session Chair
ENAR
- 2022-2023 Student Representative
NCSU Statistics Seminar Committee
- 2022 Graduate Mentor
NCSU Summer Institute in Biostatistics
- 2020-2022 President
NCSU Statistics Graduate Student Association
- 2021 Organizer
NCSU Virtual Datathon ([article](#))
- 2021 Organizer
NCSU College of Science Research Symposium
- 2019-2020 Organizer
NCSU Deep Learning Reading Group
- 2017-2018 Vice President
WSU Women in Computer Science Club
- 2017-2018 Student Representative
WSU Dean's Advisory Council
- 2016 - 2018 President
WSU Physics Club

Awards and Honors

- 2021 Paige Plagge Graduate Award for Citizenship
NCSU Statistics Department
- 2018 Outstanding Graduate in Computer Science
WSU
- 2018 Outstanding Graduate in Physics
WSU
- 2018 Outstanding Graduate in Mathematics
WSU
- 2018 Outstanding Student Leader Nominee
WSU
- 2018 1st Place

Midwest Undergraduate Data Analytics Competition

2017 Best College Overall
ASA Police Data Challenge ([link to competition](#))

2017 Top 5 Undergraduate
MinneAnalytics Data Analytics Competition

 **Computing Skills**

Julia, R, Python, PyTorch, Flux, Bash/Linux, HPC Environments, Java