Kentaro Hoffman

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EMPLOYMENT

University of Washington, Seattle — **Seattle, WA**
Postdoctoral Scholar — *June 1st 2023- Present*

- Advised by: Tyler McCormick

Johns Hopkins University, Baltimore — **Baltimore, MD**
Postdoctoral Scholar — *2022-2023*

- Advised by: Peter Searson and Scott Zeger

AFFILIATIONS

Center for Statistics and the Social Sciences (CSSS) at UW *Postdoctoral Scientist*
eScience Institute at UW, *UW Data Science Postdoctoral Fellow*

EDUCATION

University of North Carolina, Chapel Hill — **Chapel Hill, NC**
PhD in Statistics and Operations Research — *2017- 2022*

- Dissertation: Borrowing from Your Neighbors: Three Statistical Techniques from Nontraditional Sources
- Advised by: Kai Zhang and Cynthia Rudin

Rice University — **Houston, TX**
BA in Mathematics and Statistics — *2013- 2017*

RESEARCH INTERESTS

Inference using Synthetic Data, Domain Adaptation, Data Science, Natural Language Processing, Generative AI, Decision Theory, Electronic Medical Records, Global Health

PUBLICATIONS

Preprint

Kentaro Hoffman, Stephen Salerno, Jeff T. Leek, Tyler McCormick (2024) **Some models are useful, but for how long?: A decision theoretic approach to choosing when to refit large-scale prediction models** *Under Review at NeurIPS*

Kentaro Hoffman, Stephen Salerno, Awan Afiaz, Jeffrey T. Leek, Tyler H. McCormick (2024) **Do We Really Even Need Data?** *Under Review at Science*

Journal/Conference Publications

Adam Visokay, Trinity Fan, Kentaro Hoffman, Stephen Salerno, Jeffrey T. Leek, Li Liu, Tyler H. McCormick (2024) **From Narratives to Numbers: Valid Inference Using Language Model Predictions from Verbal Autopsy Narratives** *To appear at COLM 2024*

Harsh Parikh*, Kentaro Hoffman*, Haoqi Sun*, Wendong Ge, Rajesh Amerineni, Lin Liu, Alexander Volfovsky, Sahar Zafar, Cynthia Rudin, M. Brandon Westover. (2023) **Effects of epileptiform activity on discharge outcome in critically ill patients in the USA: a retrospective cross-sectional study** *Lancet Digital Health* ,Vol. 5, Issue 8, pp. 495–e502

Hoffman, K. Lees, Johnathan, and Zhang, Kai. (2023) Local **Change Point Detection and Signal Cleaning using EEMD with applications to Acoustic Shockwaves** *Circuits Systems and Signal Processing* , Vol 42, Number 8, pp. 4669–4690

Hoffman, K. Babichev, A. and Dabaghian, Y. (2016) **A model of topological mapping of space in bat hippocampus.**. *Hippocampus* 26: 1345-1353.

Peer Reviewed short comment

Ruobin Gong, Kentaro Hoffman, Yifan Cui, and Jan Hannig. **Technical Comment on "Policy impacts of statistical uncertainty and privacy"** *Science* DOI:10.1126/science.adf9724

Hoffman, K., Hannig, J. and Zhang, Kai. (2021) **Comments on "A Gibbs sampler for a class of random convex polytopes**, *Journal of the American Statistical Association* 116:535, 1206-1210

Technical Report

Kentaro Hoffman, Tyler McCormick, and Jan Hannig. (2024) **Dempster-Shafer P-values: Thoughts on an Alternative Approach for Multinomial Inference** `https://arxiv.org/abs/2402.17070`

Press

Fitzgerald, S. (2023, July 20). New study shows association between Epileptiform Activity and Poor ICU Outcomes. *Neurology Today*

HONORS AND AWARDS

eScience Instiute Azure Compute Funding ($ 6,500 Award) *2023-2024*
eScience Instiute Postdoctoral Fellowship ($ 2,000 Award) *2023-2024*
SAMSI Research Assistant Fellowship *2022*
NIH BD2K Biomedical Graduate Fellow *2017-2022*

SOFTWARE

IPD `https://github.com/awanafiaz/IPD`
The Inference on Predicted Data is a package to allow one to perform valid statistical inference when some of the data is generated from a black-box AI model.

PRESENTATIONS

Valid Inference Using Language Model Predictions from Verbal Autopsy Narratives
eScience Institute (UW) *2024*

Fairness and Pitfalls in Fairness for Causality
Guest Lecturer for COMPSCI 198 (UC Berkley) *2021*

Fairness and Pitfalls in Fairness for Causality
Guest Lecturer for COMPSCI 198 (UC Berkley) *2021*

Causal Estimation of Seizure-Like Brain Activity
UNC BIOS/STOR Joint Seminar *2021*

Multi-Resolution Inference for Multinomial Tests of Uniformity using Dempster-Shafer
Universiy of Liverpool Institute for Risk and Uncertainty. *2021*

Multi-Resolution Inference for Multinomial Tests of Uniformity using Dempster-Shafer
UNC STOR Graduate Seminar *2021*

Causal Estimation of Seizure-Like Brain Activity
Joint Statistical Meeting, Seattle *2021*

TEACHING EXPERIENCE

PhD Qualifying Exam Recitation (Instructor) **Chapel Hill, NC**
University of North Carolina Chapel Hill *2021*

STOR 320: Introduction to Data Science (Instructional Assistant) **Chapel Hill, NC**
University of North Carolina Chapel Hill *2021*

STOR 120: Foundations of Statistics and Data Science (Primary Instructor) **Chapel Hill, NC**
University of North Carolina Chapel Hill *2020*

STOR 155: Introduction to Data Models and Inference (Primary Instructor) **Chapel Hill, NC**
University of North Carolina Chapel Hill *2019-2020*

STAT 601: Neural Machine Learning (Instructional Assistant) **Houston, TX**
Rice University *2017*

MENTORSHIP

Qirui Zhao, UW Statistics	Currently working on MS Thesis
Adam Visokay, UW Sociology	Currently working on PhD Thesis
Trinity Fan, UW Statistics	Currently working on PhD Thesis
Awan Afiaz, UW Biostatisitics	Currently working on PhD Thesis
Jizhou Tian, JHU, Biostatistics Master Thesis,	Now at Brown Biostatistics
Mikhal Ben-Joseph, B.A UNC STOR Undergraduate Research	Now at Harvard Law

PROFESSIONAL ACTIVITIES

Organizer "Subpopulation Struggle: Navigating the Tension between Generalization and Specificity for Inference on subpopulations" *ICHPS 2025*
Student Aide to Hiring Committee *UW 2023*
Invited Chair "Recent developments in methods for digital Brain Health data" *JSM 2023*
Graduate Mentor *ASA DataFest 2020*
Referee Services *Management Science, Stat*