BRODY ERLANDSON

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EDUCATION

PhD in Statistics, Colorado State University, GPA: 3.87/4.00 — Aug 2022 - Current
M.S. in Data Science, University of Michigan, GPA: 3.97/4.00 — April 2022
B.S. in Mathematics, Eastern Michigan University, GPA: 3.95/4.00 — December 2019
Minor in Philosophy, **Honors**: Deans list and Summa Cum Laude

EXPERIENCE

Algorithms Engineer Intern — May 2023 - August 2023
KLA — *Ann Arbor, MI*

Graduate Teaching Assistant — August 2022 - Present
Colorado State University — *Fort Collins, CO*

Student Research Assistant II: Nielsen Consumer Panel Research — March 2021 - August 2022
University of Michigan — *Ann Arbor, MI*

Lecturer (Part-time) — May 2022 - August 2022
Washtenaw Community College — *Ann Arbor, MI*

Graduate Student Instructor — August 2021 - April 2022
University of Michigan — *Ann Arbor, MI*

Volunteer Graduate Student Peer Mentor at UofM and SOARS at CSU

PROJECTS, RESEARCH, & TEACHING

Deep Learning Classification with Noisy Labels KLA internship project

- Researched and modified state of the art noisy-label deep learning classification techniques for KLA data. The methods utilized semi- and self-supervised learning, alongside advance CNNs. Achieved accuracies nearing those of a clean dataset (within 3-5%) in datasets with up to 20% noise.

Nielsen Consumer Panel Research Assisted Dr. Robert Manduca, Dept. Sociology, University of Michigan

- Utilized Nielsen Consumer Panel data to analyze purchasing habits across socioeconomic groups; tasks included data cleaning, EDA, analysis, dimension reduction, and clustering.

Identifying Musical Instruments in an Audio Recording with RNNs With support from Dr. Andrew Ross.

- Implemented deep learning for instrument recognition in audio files, using a Recurrent Neural Network on simulated audio. Actively enhancing project results for future GitHub release.

Research Interest Bayesian Modeling, Probabilistic Machine Learning, and Causal Inference.

Highlighted Teaching *CSU*: STAA 578 Machine Learning, STAA 575 Applied Bayesian Statistics, STAA 577 Statistical Learning and Data Mining, STAA 567 Computational and Simulation Methods, *WCC*: MATH 197 Linear Algebra, *UofM*: STATS 250 Introduction to Statistics, STATS 413 Linear Regression Analysis

SKILLS

Modeling	Regression (Linear to Splines), Supervised and Unsupervised Learning (ML, Deep Learning, and Clustering), and Bayesian Modeling.
Programming Languages	Python, C++, R, and SQL.
Other	Data Manipulation, Git/GitHub, LaTeX, High Performance Computing, and Linux Command-line
Soft Skills	Communication, Problem Solving, Creativity, Project Management, Leadership.