

Robert Thorstad, PhD

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SKILLS

Programming Languages: Python, R, SQL, Java, HTML

Machine Learning: Natural Language Processing, Deep Learning, Dimensionality Reduction, Clustering

Quantitative Methods: A/B Testing, Multilevel Modeling, Bootstrapping, Dynamic Time Warping, ANOVA

EXPERIENCE

Data Scientist, *The Wall Street Journal*, New York City Jun 2020 - Present

- Lead data science contributor to experimentation at WSJ. Led article recommendation AB tests resulting in changes on every WSJ article page; standardized pre- and post-test analysis for all product tests, resulting in faster tests, more winning tests, and stronger metrics; evangelized best practices via documentation and dashboards, allowing product leaders to design better initial tests.
- Primary contributor to two WSJ-wide personalization projects: a microsurvey on every WSJ article page and (in progress) a model for personalizing mobile push notifications.
- Drove WSJ-wide data reporting via a dashboard and machine learning model on audience needs used by editorial and membership teams, and by developing two WSJ product dashboards used regularly in quarterly roadmap development.

Data Science Fellow, *Insight Data Science*, New York City Jan 2020 - Jun 2020

- Developed web application to automatically grade condition of sports trading cards, making expert-level grading accessible to millions of peer-to-peer transactions.
- Trained convolutional neural network to grade 90,000 trading card pictures and used attention/saliency maps to understand model's predictions
- Demonstrated model is twice as accurate and three times as reliable as human amateurs by conducting human experiments on 30 participants

Cognitive Scientist, *Emory University*, Atlanta, GA Aug 2014 - Dec 2019

- Led use of large-scale human behavior to predict personal psychology by applying machine learning and data mining to 100 million social media posts, resulting in 8 peer-reviewed publications and Emory Research Catalyst Award
- Demonstrated that social media posts predict poster's decisions about current versus future rewards and predict poster's mental health by combining natural language processing with human experiments
- Shaped teaching of computational methods to over 200 students through founding a python programming group, assisting at Software Carpentry and DataFest events, and statistical consulting

Data Services Fellow, *Emory University Libraries*, Atlanta, GA Aug 2019 - Dec 2019

- Received competitive fellowship at Emory libraries (out of 3 awarded to all Emory PhD students) to serve as primary programmer and statistician for graduate- and faculty-level research projects and consulted with >20 students and researchers
- Served as key contributor to dissertation projects including quantifying 50 years of migration patterns to American South by aggregating US census microdata from 10s of millions of households
- Led university-wide workshops on Python programming and social media mining

EDUCATION

Emory University, Atlanta, GA 2019
PhD, Cognitive Psychology

Haverford College, Haverford, PA 2012
BA, Philosophy with High Honors