Robert Thorstad, Data Scientist

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EXPERIENCE

Emory University, PhD Researcher 2014-08-01 — 2019-12-20

- Trained a convolutional neural network to distinguish 100,000s of pictures of objects and scenes using cues we are now comparing to the human brain (Cheng, Thorstad, & Dilks, in prep.).
- Used classification (L2 logistic regression), clustering (DBSCAN), and dimensionality reduction (tSNE) to show that people's Reddit posts predict whether they have a mental illness (Paper: https://tinyurl.com/thorstad2019)
- Deployed sentiment analysis and dynamic time warping to extract the emotional arc of personal narratives. We found that most stories follow one of six common culturally derived arcs. (Demo: https://tinyurl.com/narr-arcs).
- Employed CoreNLP temporal reference tagging to show that the future thinking implicit in millions of tweets predicts people's real-world decisions (Paper: https://tinyurl.com/pnas2018, Press: https://tinyurl.com/pnascoverage).
- Mentored 2 undergraduate students in a project using machine learning to predict people's decisions
- Performed 15 hours statistical consulting for project using a mobile app intervention for eating disorders.
- Publised 3 peer-reviewed articles and book chapters in top scientific outlets (PNAS), published 5 peer-reviewed conference papers, and won the Emory Research Catalyst Award.

EDUCATION

Emory University 2014-08-19 — 2018-12-20

PhD - Cognitive Psychology

- Machine Learning
- Regression
- Data Mining the Mind
- ANOVA
- Minds, Brains, and Machines
- Multilevel Modeling

SKILLS

Machine Learning: Natural language processing (word embeddings, topic modeling, sentiment analysis), Deep learning (CNN, RNN), Dimensionality reduction (tSNE, pPCA), Clustering (DBSCAN, kmeans++)

Programming Languages: Python (Tensorflow, scikit-learn, gensim, pandas, seaborn, numpy, bokeh, pysqlite), SQL, R (ggplot, tidyr, dplyr), SPSS, HTML, Java

Analytic Skills: A/B testing, Experimental design, Multilevel modeling, Regression, ANOVA, Time Series Analysis