

# Timothy James Leffel

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<http://lefft.xyz> 

[github.com/lefft](https://github.com/lefft) 

## ABOUT

I'm a generative linguist by training, and a data scientist and researcher by profession. I have worked on tasks ranging from document classification and topic modeling to the development of automated data ingestion and reporting systems. I approach NLP problems with industry standard tooling and the intuitions of an empirically-focused language scientist. Publications, teaching materials, etc. are available at <http://lefft.xyz>.

## WORK EXPERIENCE

2019– Research Scientist. Amazon.

- >> Applied machine learning for advertisement
- >> Ad sourcing and relevance modeling

2016–19 Data Scientist (Research Scientist 2016-18). NORC at the University of Chicago.

- >> social media text mining (sentiment analysis, document classification, topic modeling, ...)
- >> pre-processing; classifier training and evaluation; simulation and resampling; visualization

2014–16 Postdoctoral Researcher. Language Processing Lab, Department of Linguistics. University of Chicago

- >> experimental design and implementation (surveys, eye-tracking for visual world studies)
- >> data analysis and modeling (mixed-effects and logistic regression, RM-ANOVA, others)

2015 Data Science Intern (p/t). Vantage Sports Inc.

- >> development and implementation of daily fantasy sports lineup optimization algorithm
- >> evaluation of competing predictive models for daily fantasy performance of NBA players

2010–16 Adjunct Instructor and Teaching Assistant in Linguistics and Psychology.

- >> primary instructor or TA for various undergrad courses in linguistics and psychology
- >> 2016 at the University of Chicago; 2010–2014 at New York University

## EDUCATION

2014 PhD, Linguistics. New York University

2009 BA with honors, *magna cum laude*, Linguistics/Philosophy. The Ohio State University

## TECHNICAL SKILLS

### core languages and computing stack

- >> **Python:** pandas, numpy, scikit-learn, gensim, nltk, keras
- >> **R:** dplyr, ggplot2, lme4, shiny, text2vec. Strong command of both base and hadleyverse dialects
- >> **tools:** AWS EC2/S3; basic web dev (Django); (R)markdown; bash scripting; git/github; html/css;  $\text{\LaTeX}$
- >> **other:** basic literacy in C/C++, Javascript, and Haskell. Enthusiastic and quick (but careful) learner

### tasks and analysis techniques

- >> deep experience with classification of short texts and construction of term embeddings from corpus data
- >> neural network-based modeling for document classification and term representation/clustering tasks
- >> mixed-effects regression modeling; permutation and randomization testing for experimental data
- >> time-series analysis of psycholinguistic data for eye-tracking and neuro-imaging (MEG) studies