

**Research interests:** natural language processing (NLP) and computational social science.

## Education

**University of California, Berkeley**

**PhD. School of Information.**

Aug 2019 – Present

- Advisor: David Bamman.

**Stanford University**

**MS. Computer Science.** Depth area in Artificial Intelligence.

Sept 2017 – June 2019

- Coursework: artificial intelligence, computer vision, computational biology, social networks, algorithms, natural language understanding, databases, logic, decision making under uncertainty.

**BS. Symbolic Systems** with distinction. Concentration in Natural Language.

Sept 2014 – June 2018

- Study abroad at University of Oxford, Winter 2017, studied theoretical neuroscience.
- Coursework: natural language processing with deep learning, spoken language processing, mining massive datasets, semantics & pragmatics, syntax, social psychology, psycholinguistics, human behavioral biology.

## Papers

\* indicates equal contribution

**Lucy\* L.,** Demszky\*, D., Bromley, P., and Jurafsky, D. (2019). *Content Analysis of Textbooks via Natural Language Processing: Novel Findings on Gender, Race, and Ethnicity in Texas US History Textbooks*. In Preparation.

**Lucy L.,** & Mendelsohn, J. (2019). *Using sentiment induction to understand variation in gendered online communities*. Society for Computation in Linguistics (SCiL).

**Lucy, L.,** & Gauthier, J. (2017). *Are distributional representations ready for the real world? Evaluating word vectors for grounded perceptual meaning*. Language Grounding for Robotics (RoboNLP) Workshop at ACL.

Invited talk: OpenAI, San Francisco, Aug 2017.

## Presentations

*Content Analysis of Textbooks via Natural Language Processing*. Text as Data (TADA). Stanford, CA. Oct 2019.

## Grants & Awards

National Science Foundation Graduate Research Fellowships Program.

April 2019

K. Jon Barwise Award for Distinguished Contributions to the Symbolic Systems Program.

June 2018

Stanford Undergraduate Advising & Research (UAR) Small Grant. \$1,500.

May - June 2018

Symbolic Systems Grants for Education and Research (GEAR). \$1,145.

Aug 2017

Phi Beta Kappa, elected as junior.

May 2017

## Experience

**Stanford Computer Science** | Research Assistant | Stanford, CA

Jan 2018 – Dec 2019

- Investigated the framing and representation of underrepresented groups in history textbooks with linguistics PhD student Dora Demszky.
- Advised by linguistics professor Dan Jurafsky and education professor Patricia Bromley.

**École Polytechnique Fédérale de Lausanne** | Research Intern | Lausanne, Switzerland

July 2018 – Sept 2018

- Interned at Summer@EPFL, an international research program, with Professor Robert West in the Data Science Lab.
- Operationalized and analyzed behavioral trends in a political quote dataset using Apache Spark, emotion lexicons, Stanford CoreNLP parsers, and social networks.

**Stanford Computer Science** | Research Assistant | Stanford, CA

April 2017 – June 2018

- Collaborated on computational social science projects with Stanford postdoctoral researcher David Jurgens, now a University of Michigan assistant professor, in the Stanford Network Analysis Project (Jure Leskovec) and NLP group (Dan Jurafsky).
- Used language and social network features to classify fictional and real relationships with scikit-learn, NLTK, and Keras.
- Built a corpus of television dialogue with 131 million words, crawled for ~1 billion tweets, and crowdsourced for annotations.

## Teaching & Advising

**Stanford Computer Science** | Course Assistant | Stanford, CA

April 2019 – June 2019

- Assisted the teaching of a graduate-level course on natural language understanding (CS 224U) and awarded a bonus for being in the top 5% of course assistants in our department.
- Crafted and taught tutorials for Jupyter notebooks and NumPy, and mentored students' final projects.

**Stanford Symbolic Systems Program** | Advising Fellow | Stanford, CA

Sept 2016 - June 2017, Jan 2019 – June 2019

- Acted as the liaison between the program's administration and 140+ students.
- Advised prospective and current students for a total of four academic quarters.
- Planned program events, held office hours, and provided feedback on the major's curriculum requirements.

**Stanford Electrical Engineering** | Course Assistant | Stanford, CA

Sept 2017 - Dec 2017

- Assisted the teaching of a 200-student applied linear algebra course (EE/CME 103) with professors Stephen Boyd and David Tse, and received positive student evaluations.
- Taught a weekly section covering vectors, matrices, and least squares, and their applications such as control, time-series prediction, and document analysis.

## Service

**Berkeley AI4ALL** | Project Developer & TA

Aug 2019

**Stanford AI4ALL** | Research Mentor

June 2019 – July 2019

**Girls Teaching Girls to Code** | NLP Track Mentor, Lead

April 2018, April 2019

## Skills

**Computer Languages:** Python, Julia, C++, SQL

**Natural Languages:** English, Mandarin Chinese, French.

**Tools:** NLTK, Stanford CoreNLP, SpaCy, scikit-learn, Apache Spark, MTurk, Figure Eight, Keras, TensorFlow, PyTorch.