

# Maria Antoniak

✉ maa343@cornell.edu

🌐 <http://maria-antoniak.github.io>

## Research Interests

natural language processing • computational social science • cultural analytics •  
unsupervised methods • online communities • healthcare support • affect & narrative

## Education

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|--------------|---|
| 2016-Present | <b>Ph.D. Information Science</b> , Cornell University <ul style="list-style-type: none"><li>• Advisor: David Mimno</li><li>• Committee Members: Lillian Lee, Jeff Rzeszutarski, Richard Jean So</li><li>• Minor: Computer Science</li></ul> |
| 2013-2014    | <b>M.S. Computational Linguistics</b> , University of Washington <ul style="list-style-type: none"><li>• Advisor: Fei Xia</li><li>• Thesis: <i>Extracting Topically Related Synonyms from Twitter</i></li></ul>                             |
| 2007-2011    | <b>B.A. Program of Liberal Studies</b> , University of Notre Dame <ul style="list-style-type: none"><li>• Glynn Family Honors Program</li></ul>   |

## Publications

**Imagined examples of painful experiences provided by chronic low back pain patients and attributed a pain numerical rating score.**

Robert Stewart Griffin, Maria Antoniak, Phuong Dinh Mac, Vladimir Kramskiy, Seth Waldman, David Mimno.

*Frontiers in Neuroscience*, 2020.

**Narrative Paths and Negotiation of Power in Birth Stories.**

Maria Antoniak, David Mimno, and Karen Levy.

*Proceedings of the ACM on Human-Computer Interaction (CSCW)*, 2019.

**Evaluating the Stability of Embedding-based Word Similarities.**

Maria Antoniak and David Mimno.

*Transactions of the Association for Computational Linguistics (TACL)*, 2018.

**Natural Language Processing Techniques on Oil and Gas Drilling Data.**

Maria Antoniak, Jeff Dagliesh, and Justin Lo.

*SPE Intelligent Energy Conference and Exhibition*, 2016.

### **Leveraging Paraphrase Labels to Extract Synonyms from Twitter.**

Maria Antoniak, Eric Bell, and Fei Xia.

*Proceedings of the Florida Artificial Intelligence Research Society Conference (FLAIRS)*, 2016.

## Workshop Presentations

### **Diverging Paths in Birth Stories: A Medical Dataset for Narrative Analysis.**

Maria Antoniak and David Mimno.

Oral presentation at *Workshop for Narrative Understanding, NAACL*, 2019.

### **Comparative Analysis of Cultural Biases with Word Embeddings.**

Maria Antoniak and David Mimno.

Poster presented at *Text as Data (TADA)*, 2018.

### **Evaluating the Stability of Embedding-based Word Similarities.**

Maria Antoniak and David Mimno.

Poster presented at *Amazon Graduate Research Symposium*, 2017.

### **Extracting Topically Related Synonyms from Twitter.**

Maria Antoniak, Eric Bell, and Fei Xia.

Poster presented at *Workshop for Women in Machine Learning (WiML)*, collocated with *NeurIPS*, 2015.

## Panels

### **Replication and Computational Literary Studies.**

Christof Schoch, Karina van Dalen-Oskam, Maria Antoniak, Fotis Jannidis, David Mimno.

*Digital Humanities*, 2020.

### **Cultural Analytics and the Book Review: Models, Methods, and Corpora.**

Matthew J. Lavin, Kent Chang, Dan Sinykin, Melanie Walsh, Maria Antoniak, Kent Chang, Yuerong Hu, Wenyi Shang, Aniruddha Sharma, Shubhangi Singhal, Ted Underwood, Jessica Witte, and Peizhen Wu.

*Digital Humanities*, 2020.

## Industry Experience

2020 Summer  
☞ 2020 Fall

### **Microsoft Research**, Research Intern

- Mentors: Fernando Diaz, Asia Biega, Alexandra Olteanu
- Team: Fairness, Accountability, Transparency, Ethics (FATE)
- Self-disclosure and trust in online gaming communities.

2019 Summer

### **Facebook**, Core Data Science Intern

- Mentors: Amit Bahl and Emma Ideal
- Unsupervised models of conversational roles in online health support and hiring groups.

- 2018 Summer **Microsoft Research**, Research Intern
- Mentor: Ranjani Ramamurthy
  - Unsupervised extractive summarization of clinical dialogues for Project EmpowerMD.
- 2014-2016 **MAANA**, Data Scientist
- Led the data science design and implementation of successful proof-of-concept projects for Fortune 100 companies (e.g., Shell, General Electric, Chevron).
  - Implemented the NLP sections of a Scala machine learning pipeline.
  - Created a custom named entity recognition/normalization system for unstructured text and a query expansion system for the core product.
- 2014 Summer **Pacific Northwest National Laboratory**, National Security Intern
- Mentor: Eric Bell
  - Twitter synonym extraction to improve paraphrase detection performance using machine translation metrics.
  - Supported other NLP projects (sentiment analysis, topic modeling).
- 2013 Summer **Pacific Northwest National Laboratory**, Mobile Developer Intern
- Mentor: Courtney Corley
  - Created *FoodFeed*, an interactive foodborne illness application using public health data from the FDA and CDC, which won PNNL's biosurveillance mobile app competition.

## Teaching Experience

- Fall 2020 TA, **CS 3350: TEXT MINING FOR HISTORY AND LITERATURE**, Cornell University
- Fall 2019 TA, **CS 3350: TEXT MINING FOR HISTORY AND LITERATURE**, Cornell University
- Spring 2019 TA, **CS 3300: DATA-DRIVEN WEB APPLICATIONS**, Cornell University
- Spring 2017 TA, **CS 3300: DATA-DRIVEN WEB APPLICATIONS**, Cornell University
- 2011-2012 English Teacher, **UKRAINIAN CATHOLIC UNIVERSITY**, Lviv, Ukraine
- 2010 & 2011 TA, **HUMANITIES SPRING**, Assisi, Italy
- 2010-2011 TA, **FIRST YEAR WRITING TUTORIAL**, University of Notre Dame
- 2008-2011 Writing Tutor, **UNIVERSITY WRITING CENTER**, University of Notre Dame

## Honors, Awards, & Scholarships

- 2018 Information Science Outstanding Service Award, *Cornell University*
- 2016-2017 Information Science Fellowship, *Cornell University*
- 2013 1st Place, *PNNL Biosurveillance Mobile App Development Competition*
- 2007-2011 Glynn Family Honors Program, *University of Notre Dame*
- 2007 National Merit Scholar, *National Merit Scholarship Program*

## Professional Service

Reviewed for *NAACL 2021*

Reviewed for *EACL 2021*

Reviewed for *CHI 2021*

Reviewed for *EMNLP 2020*

## Community Service

2020-2021	<i>President</i> , Graduate Students for Gender Inclusion in Computing
2020-2021	<i>Student Representative</i> , Broadening Participation in Information Science (Cornell)
2020-2021	<i>Webmaster</i> , Cornell Graduate Women in Science
2019-2020	<i>President</i> , Graduate Students for Gender Inclusion in Computing
2019	<i>Lead Organizer</i> , Cornell Information Science Research Retreat
2019-2020	<i>Treasurer</i> , Cornell Graduate Women in Science
2018-2019	<i>Social Chair</i> , Cornell Graduate Women in Science
2018-2019	<i>Treasurer</i> , Information Science Graduate Student Association
2017-2018	<i>Vice President &amp; Treasurer</i> , Information Science Graduate Student Association
2010-2011	<i>Editorial Board Member</i> , Notre Dame Journal of Undergraduate Research

## Non-Degree Studies

2016 Summer	Lisbon Machine Learning Summer School (LxMLS), <i>Lisbon, Portugal</i>
2011 Summer	Ukrainian Language Summer School, <i>Lviv, Ukraine</i>
2010 Spring	French Language & Culture, Université Catholique de l'Ouest, <i>Angers, France</i>