

# Maria Antoniak

✉ [maa343@cornell.edu](mailto:maa343@cornell.edu)

🌐 <http://maria-antoniak.github.io>

## Research Interests

natural language processing • computational social science • cultural analytics •  
unsupervised methods • online communities • wellbeing • affect

## Education

- |              |   |
|--------------|---|
| 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

[Tags, Borders, and Catalogs: Social Re-Working of Genre on LibraryThing](#)

**Maria Antoniak**, Melanie Walsh, and David Mimno

*Proceedings of the ACM on Human-Computer Interaction (CSCW)*, 2021

[The Goodreads “Classics”: A Computational Study of Readers, Amazon, and Crowdsourced Literary Criticism](#)

Melanie Walsh and **Maria Antoniak**

*Post45 x Journal of Cultural Analytics*, 2021

[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 & Talks

**Building Social Bonds in Online Gaming Communities.**

Maria Antoniak and Alexandra Olteanu

*Microsoft AI & Gaming Research Summit*, 2021.

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

*University of Michigan, Data Science/Computational Social Science Seminar*, 2020.

**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

- 2021 Summer **Twitter**, Applied Research Intern
- Mentors: Rani Nelken
- 2020 June - 2021 May **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/INFO 3350: Text Mining for History and Literature**, Cornell University
- Fall 2019 TA, **CS/INFO 3350: Text Mining for History and Literature**, Cornell University
- Spring 2019 TA, **CS/INFO 3300: Data-Driven Web Applications**, Cornell University
- Spring 2017 TA, **CS/INFO 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, <i>Cornell University</i>
2016-2017	Information Science Fellowship, <i>Cornell University</i>
2013	1st Place, <i>PNNL Biosurveillance Mobile App Development Competition</i>
2007-2011	Glynn Family Honors Program, <i>University of Notre Dame</i>
2007	National Merit Scholar, <i>National Merit Scholarship Program</i>

## Professional Service

Reviewed for *NAACL 2021*  
Reviewed for *EACL 2021*  
Reviewed for *CHI 2021*  
Reviewed for *EMNLP 2020*

## Mentoring

2019-2020	<i>LeAnn McDowall</i> , undergraduate; data analysis of birth control websites; won best presentation award at Black in AI at NeurIPS 2020; current ICWSM submission.
-----------	---

## 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 at 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>