Michael Miller Yoder

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EDUCATION

Carnegie Mellon University, Pittsburgh, PA
Ph.D., Language and Information Technologies   2021
     Advisor: Carolyn P. Rosé
     Thesis: "Computational models of identity presentation in language" PDF
M.S., Language Technologies   2017

Goshen College, Goshen, IN
B.A., Computer Science   2013
     Minors: English, International Studies

RESEARCH INTERESTS

Natural language processing, computational social science, hate speech, language and identity, sociolinguistics, discourse analysis, digital humanities

CONFERENCE & WORKSHOP PUBLICATIONS

How Hate Speech Varies by Target Identity: A Computational Analysis
Michael Miller Yoder, Lynnette Hui Xian Ng, David West Brown, Kathleen M. Carley
Proceedings of the Conference on Computational Natural Language Learning (CoNLL), 2022.

FanfictionNLP: A Text Processing Pipeline for Fanfiction
Michael Miller Yoder, Sopan Khosla, Qinlan Shen, Aakanksha Naik, Huiming Jin, Hariharan Muralidharan, Carolyn P. Rosé
Proceedings of the Workshop on Narrative Understanding, 2021. PDF.

Modeling Unstructured Data: Teachers as Learners and Designers of Technology-enhanced Artificial Intelligence Curriculum
Cansu Tatar, Michael Miller Yoder, Madeleline Coven, Kenia Wiedemann, Jie Chao, William Finzer, Shiyan Jiang, Carolyn P. Rosé
Proceedings of the International Society of the Learning Sciences, 2021. PDF.

Phans, Stans and Cishets: Self-presentation Effects on Content Propagation in Tumblr
Michael Miller Yoder, Qinlan Shen, Yansen Wang, Alex Coda, Yunseok Jang, Yale Song, Kapil Thadani, Carolyn P. Rosé
Proceedings of the ACM Conference on Web Science (WebSci), 2020. PDF.

Perceptions of Censorship and Moderation Bias in Political Debate Forums
Qinlan Shen, Michael Miller Yoder, Yohan Jo, Carolyn P. Rosé
Proceedings of the International AAAI Conference on Web and Social Media (ICWSM), 2018. PDF.

Roles and Success in Wikipedia Talk Pages: Identifying Latent Patterns of Behavior
Keith Maki, Michael Miller Yoder, Yohan Jo, Carolyn P. Rosé
Proceedings of the International Joint Conference on Natural Language Processing (IJCNLP), 2017. PDF.
Best Student Paper Award.

Modeling Dialogue Acts with Content Word Filtering and Speaker Preferences
Yohan Jo, Michael Miller Yoder, Hyeju Jang, Carolyn P. Rosé
Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP), 2017. PDF.

Code-Switching as a Social Act: The Case of Arabic Wikipedia Talk Pages
Michael Miller Yoder, Shruti Rijhwani, Carolyn P. Rosé, Lori Levin
Proceedings of the Workshop on Natural Language Processing and Computational Social Science (NLP+CSS), 2017. PDF.

Metaphor Detection with Topic Transition, Emotion and Cognition in Context
Hyeju Jang, Yohan Jo, Qinlan Shen, Michael Miller, Shane Moon, Carolyn P. Rosé
Proceedings of the Association for Computational Linguistics (ACL), 2016. PDF.

JOURNAL
ARTICLES

An empirical analysis of high school students' practices of modelling with unstructured data
Shiyan Jiang, Amato Nocera, Cansu Tatar, Michael Miller Yoder, Jie Chao, Kenia Wiedemann, William Finzer, Carolyn P. Rosé
British Journal of Educational Technology, 1–20, 2022. HTML.

Unpacking a political icon: "Bike lanes" and orders of indexicality
Michael Miller Yoder, Barbara Johnstone
Discourse & Communication, 12(2), 192–208, 2018.

WHITEPAPERS &
DEMONSTRATIONS

The Relationship Between Antisemitism and COVID-19 Conspiracy on Twitter
Grace Garner, Madeleine McGrann, Maja Lynn, Rachel Kranson,
Michael Miller Yoder, Daniel Klug
Whitepaper, Collaboratory Against Hate, 2022. PDF.

Research Needs for Countering Extremist Hate
Michael Miller Yoder, Hana Habib
Whitepaper, Collaboratory Against Hate, 2022. PDF.

StoryQ: A Web-Based Machine Learning and Text Mining Tool for K-12 Students
Jie Chao, Bill Finzer, Carolyn P. Rosé, Shiyan Jiang, Michael Miller Yoder, James Fiacco, Chas Murray, Cansu Tatar, Kenia Wiedemann
SIGCSE 2022: Proceedings of the 53rd ACM Technical Symposium on Computer Science Education V. 2, 1178, 2022.

CONFERENCE
PRESENTATIONS

The Spatiotemporal Reach of Hate Narratives
Ahmad Diab, Michael Miller Yoder, Yu-Ru Lin
Eradicate Hate Global Summit 2022 Poster Session, Pittsburgh, PA, 2022.

The Relationship Between Antisemitism and COVID-19 Conspiracy on Twitter
Grace Garner, Madeleine McGrann, Maja Lynn, Rachel Kranson, Daniel Klug,
Michael Miller Yoder
Eradicate Hate Global Summit 2022 Poster Session, Pittsburgh, PA, 2022.

"Everyone is gay and nothing hurts":
the presentation of queer relationships in fanfiction
Michael Miller Yoder, Luke Breitfeller, Carolyn P. Rosé
Association for Computers and the Humanities, Pittsburgh, PA, 2019.

Ron the Death Eater: plotting characterization from canon to fanfiction
Michael Miller Yoder, Qinlan Shen, James Fiacco, Carolyn P. Rosé
Society for Text & Discourse, New York, NY, 2019.

Identity and interaction on Tumblr
Michael Miller Yoder, Qinlan Shen, Yansen Wang, Alex Coda, Yunseok Jang, Yale Song, Kapil Thadani, Carolyn P. Rosé
Student Research Symposium
Language Technologies Institute, Carnegie Mellon University, 2019.
Best Poster Award.

Linguistic liminality: Tamazight, Arabic and French in Guigou, Morocco
Michael Miller
Student Research Symposium, Goshen College, 2013.
Audience Choice Award.

INVITED TALKS & PANELS

Beyond a hate speech binary
Social Cybersecurity Working Group (virtual), 2022.

Computational models for social good: Beyond bias and representation *(panel)*
Conference on Social Computing, Behavioral-Cultural Modeling and Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS), Pittsburgh, PA, 2022.

Creating a resource directory for crisis *(panel)*
Eradicate Hate Global Summit, Pittsburgh, PA, 2022.

Detecting hate speech with natural language processing
IDeaS Summer Institute, Carnegie Mellon University, Pittsburgh, PA, 2022.

Computational models of identity presentation in language
Department of Linguistics, University of Pittsburgh, Pittsburgh, PA, 2020.

TEACHING

Computational Ethics for Natural Language Processing   **Spring 2020**
Teaching Assistant
Carnegie Mellon University

Applied Machine Learning   **Spring 2019**
Teaching Assistant
Carnegie Mellon University

Introduction to Artificial Intelligence   **Spring 2013**
Tutor
Goshen College

PROFESSIONAL EXPERIENCE

Postdoctoral Fellow   Carnegie Mellon University
2022–present   Pittsburgh, PA
Researcher with the Collaboratory Against Hate, an interdisciplinary initiative of Carnegie Mellon University and the University of Pittsburgh. Developing new methods for tracking and detecting hate speech in online contexts. Advised by Prof. Kathleen M. Carley in the Institute for Software Research and Prof. David West Brown in the Department of English.

Graduate Research Assistant   Carnegie Mellon University
2015–2021   Pittsburgh, PA
Apply computational models of discourse to study social meaning in language, largely using social media datasets. Advised by Prof. Carolyn P. Rosé in the Language Technologies Institute.

Software Engineering Intern   Yahoo Research/Tumblr
2019   New York, NY
Detected communities of Tumblr users from social network structure. Explored community-specific language use. Advised by Dr. Kapil Thadani.

Research Programmer/Analyst   Carnegie Mellon University
2015   Pittsburgh, PA
Designed and implemented neuroimaging database to support machine learning research. Advised by Prof. Timothy Verstynen in the Department of Psychology.

Software Developer &   GSAREH
IT Adminstrator
2014   Austin, TX area
Developed applications to recognize and map named entities in English and Arabic articles and social media. Managed software development and IT administration of a small GIS startup named Geospatial Applied Research Experts House.

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HONORS & AWARDS

NSF Graduate Research Fellowship
2015–2018
Awarded national fellowship with a focus area in natural language processing.

President's Leadership Award Scholarship, Goshen College
2009–2013
Awarded top merit scholarship for leadership in academic studies.

ACADEMIC SERVICE

Organizing:
- Collaboratory Against Hate Workshop on Practitioner Research Needs, 2022
- Eradicate Hate Global Summit 2022 Poster Session

Reviewing (NLP):
- EMNLP 2022 Computational Social Science track
- ACL Rolling Review (2022-)
- ACL-IJCNLP 2021 (**Outstanding Reviewer**)
- CoNLL 2020
- Bridging Human-Computer Interaction and NLP Workshop (HCI+NLP) 2021
- NAACL Student Research Workshop 2021, 2022
- ACL Student Research Workshop 2020
- AACL-IJCNLP Student Research Workshop 2020, 2022
- Human and Machine-in-the-Loop Evaluation and Learning Strategies Workshop (HAMLETS @ NeurIPS) 2020

Reviewing (Digital Humanities):
- *Between Invention and Audience: DocuScope and the Rhetorical Approach to Corpus Analysis* (Studies in Corpus Linguistics, John Benjamins Press), 2022
- *Humanities* journal, special issue on fanfiction, 2022
- Association for Computers and the Humanities (ACH) 2021
- Digital Humanities (DH) 2020

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INTERNATIONAL
EXPERIENCE

Bicycle Tourist

2013–2014   Paraguay, South America to Indiana, USA

Bicycled with a group of three over 10,000 miles from South America to the United States on an 11-month self-supported journey. Learned conversational Spanish and gained familiarity with Latin American culture.

Researcher and Service Worker

2012   Meknes and Guigou, Morocco

Studied Moroccan language and culture for 12 weeks while living with host families in urban and rural settings. Researched code-switching among Tamazight, French, Colloquial and Modern Standard Arabic speakers in the Middle Atlas Mountains.

Youth Camp Volunteer

2011   West Bank, Palestine & Israel

Studied and practiced Levantine and Modern Standard Arabic for 9 weeks. Participated in history and learning tours of the Israeli-Palestinian conflict while living with a Palestinian friend's family. Facilitated crafts and games for Palestinian youth.