# Laura Biester

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GitHub: github.com/lbiester

#### EDUCATION

University of Michigan Ann Arbor, MI Ph.D. in Computer Science and Engineering, Advisor: Rada Mihalcea Expected 2023 U-M Graduate Teacher Certificate

University of Michigan Ann Arbor, MI M.S. in Computer Science and Engineering, GPA: 4.0 May 2020

Carleton College Northfield, MN

June 2016 B.A. in Computer Science, GPA: 3.85, Magna Cum Laude

### **PUBLICATIONS**

#### Peer-Reviewed Publications

- M. Dong, R. Sun<sup>†</sup>, L. Biester<sup>†</sup>, and R. Mihalcea, "We Are in This Together: Quantifying Community Subjective Wellbeing and Resilience", in International Conference on Web and Social Media (ICWSM), [to appear], Jun. 2023.
- L. Biester, V. Sharma, A. Kazemi, N. Deng, S. Wilson, and R. Mihalcea, "Analyzing the Effects of Annotator Gender Across NLP Tasks", in 1st Workshop on Perspectivist Approaches to NLP at LREC, Jun. 2022.
- L. Biester, K. Matton, J. Rajendran, E. Mower Provost, and R. Mihalcea, "Understanding the Impact of COVID-19 on Online Mental Health Forums", in ACM Transactions on Management Information Systems: Special Issue on Using AI and Data Science to Handle Pandemics and Related Disruptions, Dec. 2021.
- [4] L. Biester, C. Banea, and R. Mihalcea, "Building Location Embeddings from Physical Trajectories and Textual Representations", in 2020 AACL-IJCNLP, Dec. 2020.
- L. Biester<sup>†</sup>, K. Matton<sup>†</sup>, J. Rajendran, E. Mower Provost, and R. Mihalcea, "Quantifying the Effects of COVID-19 on Mental Health Support Forums", in 1st Workshop on NLP for COVID-19 (Part 2) at EMNLP, Nov. 2020.

#### Non-Refereed Publications

L. Biester, V. Joopudi, and B. Dandala, "IBM @ TREC Clinical Trials Track 2021", in Proceedings of the Thirtieth Text REtrieval Conference (TREC 2021), Nov. 2021.

### TEACHING AND MENTORSHIP

## **Teaching**

• Instructor of Record at Carleton College Summer Liberal Arts Institute Natural Language Processing (CS 099)

July 2022

<sup>†</sup>equal contribution

• Instructor of Record at University of Michigan Elementary Programming Concecepts (EECS 183) Winter 2022

• Instructor of Record at University of Michigan Discover Computer Science (EECS 110/198)

Fall 2019, Fall 2020

• Prefect at Carleton College Mathematics of Computer Science (CS 202) Spring 2014, Fall 2015, Winter 2016

• Prefect at Carleton College Data Structures (CS 201)

Winter 2015, Spring 2015

#### Mentorship

• Vanita Sharma (Undergraduate at University of Michigan) Annotator Gender Bias in NLP Benchmarks

Fall 2021-Winter 2022

• Yujian Liu (Master's Student at University of Michigan) Temporal Effects in Depression Classification Methods

Winter 2021-Winter 2022

• Axel Avram (High School Student) Inter-country Sentiment During COVID-19 Summer 2020-Fall 2020

• Shiyu Qu (Undergraduate at University of Michigan) Location Embeddings from Reddit

Fall 2019-Winter 2020

• Camilo Muñoz (Master's Student at University of Waterloo) Ads API Team Intern at Pinterest

Winter 2018

## Industry Experience

**IBM** Remote Summer 2021 Research Intern

- Matching patient descriptions to clinical trials (2021 TREC Clinical Trials challenge)
- Part of the EMRA (electronic medical records analysis) team, mentored by Bharath Dandala

San Francisco, CA **Pinterest** Software Engineer August 2016 - August 2018

- Database sharding strategies/implementation for advertiser data
  - Inconsistency detection framework for distributed graph databases

Gumroad San Francisco, CA Summer 2015

Software Engineering Intern

API to allow creators to track sales data

- Feature to auto-populate mp3 metadata
- Feature to allow users to display their Gumroad site on their own domain

- New AngularJS application as part of the Pearson Credential Manager site

Pearson VUE Bloomington, MN

Software Development Intern

Summer 2014

- Proof of concept for internal video tutorial website

#### Professional Activities

Professional Activities	
Talks	
• IBM @ TREC CT-Track 2021	November 2021
Text REtrieval Conference (Conference Talk)	
• Towards Understanding Mental Health with Passively Collected Data Carleton College (Invited Talk)	October 2021
Panels	
• Grad Student Panel: What is grad school REALLY like?	February 2022
AAAI Undergraduate Consortium	
• Friday Night AI: AI and COVID-19	May 2020
Ann Arbor District Library/Michigan AI	
Poster Presentations and Flash Talks	
• Self-Reported Mental Health Status for Classification Labels: Effects of Data Collection CRA-WP Grad Cohort for Women Workshop	April 2021
• Changes on Mental Health Forums during the COVID-19 Pandemic Michigan AI Symposium	October 2020
• Quantifying the Effects of COVID-19 on Mental Health Support Forums $NLP\ COVID\text{-}19\ Workshop\ at\ ACL$	July 2020
• The Applicability of Embeddings to Location Time Series Data Midwest Speech and Language Days	May 2019
Organizing Committees	
• Workshop on NLP for Positive Impact (NLP4PI)	2022
Reviewing	
ACL Rolling Review	2021-Present
• CLPsych Workshop (@NAACL)	2022
• ACL	2021
• NLP for Positive Impact Workshop (@ACL)	2021

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• CLPsych Workshop (@NAACL)	2022
• ACL	2021
• NLP for Positive Impact Workshop (@ACL)	2021
• SocialNLP Workshop (@NAACL)	2021
• ACII	2021
• Natural Language Processing and Computational Social Science Workshop (@EMNLP)	2020

# VOLUNTEER ACTIVITIES

• ECSEL+ Treasurer

As a board member of ECSEL+ (Ensemble of CSE Ladies+), managed the group's finances.

Fall 2021-Present

• ECSEL+ Professional Development Chair Fall 2020–Summer 2021

As a board member of ECSEL+, organized practice prelim talks for students in CSE at the University of Michigan.

• AI4All Instructor

Taught Python programming to twenty high school students, with a focus on applications in artificial intelligence.

• AI4All Project Lead

Developed a NLP project and provided guidance for seven high school students as they learned Python and completed the project.

• Explore CS Research Organizer

Fall 2018-Winter 2019

One of five organizers of the "Explore CS Research Program," which aims to introduce students from underrepresented backgrounds to computer science research. Reviewed applications, assigned faculty mentors to students, and answered ongoing questions from students.

• Student Departmental Advisor

Fall 2015–Spring 2016

Chosen as one of two student departmental advisors at Carleton College by CS faculty. Advised students each term on picking classes, and organized a weekly "CS at the Tavern" social event.

• Lovelace Board Member and Chair Winter 2015–Spring 2016 Served as a member of the board of Carleton's women in CS group. Helped to organize weekly lab sessions, dinners, and Carleton's first diversity in CS workshop.

## SCHOLARSHIPS AND AWARDS

•	Rackham Conference Travel Grant	2022
•	Rackham Outstanding Graduate Student Instructor Award	2022
•	Graduate Student Service Award for Excellence in Climate, Diversity, and Inclusion University of Michigan CSE Division	2021
•	Phi Beta Kappa	2016
•	Kleiner Perkins Caufield & Byers Engineering Fellowship	2015
•	Grace Hopper Conference Scholarship Recipient	2015
•	Tapia Conference Scholarship Recipient	2015

#### SKILLS

- Programming Languages: Python, Java, C++, Ruby, Javascript
- Data/Machine Learning: PyTorch, Transformers, SKLearn, Numpy, Hadoop, Hive, SQL, HBase, Vitess
- Web Technologies: HTML, CSS, Flask, Ruby on Rails