Laura Biester

Phone: (215) 435-8636 Website: laurabiester.com Email: lbiester@umich.edu LinkedIn: lbiester

GitHub: github.com/lbiester

EDUCATION

University of Michigan Ph.D. in Computer Science and Engineering, Advisor: Rada Mihalcea	Ann Arbor, MI Expected 2023
University of Michigan M.S. in Computer Science and Engineering, GPA: 4.0	Ann Arbor, MI May 2020
Carleton College B.A. in Computer Science, GPA: 3.85, Magna Cum Laude	Northfield, MN June 2016

AWARDS

Rackham Outstanding Graduate Student Instructor Award

• Graduate Student Service Award for Excellence in Climate, Diversity, and Inclusion University of Michigan CSE Division

2022 2021

PUBLICATIONS

Peer-Reviewed Publications

- [1] M. Dong, R. Sun[†], **L. Biester**[†], 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.
- [2] **L. Biester**, J. Pennebaker, and R. Mihalcea, "Emotional and Cognitive Changes Surrounding Online Depression Identity Claims", in *PLOS ONE*, Dec. 2022.
- [3] 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.
- [4] **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.*
- [5] L. Biester, C. Banea, and R. Mihalcea, "Building Location Embeddings from Physical Trajectories and Textual Representations", in 1st Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics and 10th International Joint Conference on Natural Language Processing, Dec. 2020.
- [6] L. Biester[†], K. Matton[†], 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.

[†]equal contribution

Non-Refereed Publications

[7] 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

• 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

Professional Development

Engineering Teaching Consultant

Fall 2021 - Present

University of Michigan Center for Research on Learning and Teaching in Engineering

- Facilitated practices teaching sessions and learning cohorts as part of the training process for new teaching assistants
- Offered one-on-one consultations with teaching assistants
- Conducted midterm student feedback sessions and teaching observations

U-M Graduate Teacher Certificate

University of Michigan Center for Research on Learning and Teaching

2022

- Program description: http://crlt.umich.edu/um.gtc/description

Industry Experience

IBM Remote
Research Intern Summer 2021

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

Pinterest San Francisco, CA

Software Engineer

August 2016 - August 2018

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

Gumroad San Francisco, CA

Software Engineering Intern

Summer 2015

- 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

Pearson VUE

Bloomington, MN

Software Development Intern

Summer 2014

- New AngularJS application as part of the Pearson Credential Manager site
- Proof of concept for internal video tutorial website

Professional Activities

Talks

- Language and Human Behavior: Models and Measurement

 University of Manchester NLP Journal Club (Invited Talk)
- IBM @ TREC CT-Track 2021 November 2021
- 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

 Ann Arbor District Library/Michigan AI

 May 2020

Poster Presentations and Flash Talks

Text REtrieval Conference (Conference Talk)

- Self-Reported Mental Health Status for Classification Labels: Effects of Data Collection April 2021 CRA-WP Grad Cohort for Women Workshop
- Changes on Mental Health Forums during the COVID-19 Pandemic October 2020

 Michigan AI Symposium
- Quantifying the Effects of COVID-19 on Mental Health Support Forums

 NLP COVID-19 Workshop at ACL

 July 2020
- The Applicability of Embeddings to Location Time Series Data

 May 2019

 Midwest Speech and Language Days

Organizing Committees

• Workshop on NLP for Positive Impact (NLP4PI)

2022

Reviewing

• ACL Rolling Review	2021-Present
• SIGCSE Technical Symposium	2022
• Natural Language Processing and Computational Social Science Workshop (@EMNLP)	2020, 2022
• CLPsych Workshop (@NAACL)	2022
• ACL	2021
• NLP for Positive Impact Workshop (@ACL)	2021
• SocialNLP Workshop (@NAACL)	2021
• ACII	2021

VOLUNTEER ACTIVITIES

• ECSEL+ Treasurer

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

• 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 July 2020

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

- 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 HONOR SOCIETIES

_	Rackham Conference Travel Grant	2022
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•	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