Laura Biester

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ACADEMIC POSITIONS

Assistant Professor — Middlebury, VT
Department of Computer Science, Middlebury College — 2023–Present

EDUCATION

University of Michigan — Ann Arbor, MI
Ph.D. in Computer Science and Engineering, Advisor: Rada Mihalcea — 2023

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

Carleton College — Northfield, MN
B.A. in Computer Science, GPA: 3.85, *Magna Cum Laude* — June 2016

AWARDS

- Rackham Outstanding Graduate Student Instructor Award — 2022
- Graduate Student Service Award for Excellence in Climate, Diversity, and Inclusion — 2021
  University of Michigan CSE Division

PUBLICATIONS

†equal contribution

Peer-Reviewed Publications

[1] **L. Biester**, J. Pennebaker, and R. Mihalcea, "Temporal Arcs of Mental Health: Patterns Behind Changes in Depression over Time", in *Affective Computing + Intelligent Interaction (ACII) 2023, Late Breaking Results (LBR)*, Sep. 2023.

[2] **L. Biester**, I. Stewart, L. Hirshfield, R. Mihalcea, and S. Pozzi, "Lexical Measurement of Teaching Qualities", in *American Society for Engineering Education (ASEE) Annual Conference, Educational Research and Methods Division (ERM) Division*, Jun. 2023.

[3] 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)*, Jun. 2023.

[4] Y. Liu†, **L. Biester**†, and R. Mihalcea, "Improving Mental Health Classifier Generalization with Pre-Diagnosis Data", in *International Conference on Web and Social Media (ICWSM)*, Jun. 2023.

[5] **L. Biester**, J. Pennebaker, and R. Mihalcea, "Emotional and Cognitive Changes Surrounding Online Depression Identity Claims", in *PLOS ONE*, Dec. 2022.

[6] **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.

[7] **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.

[8] **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.

[9] **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.

Non-Refereed Publications

[10] **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   July 2022
  Natural Language Processing (CS 099)
- **Instructor of Record** at University of Michigan   Winter 2022
  Elementary Programming Concecepts (EECS 183)
- **Instructor of Record** at University of Michigan   Fall 2019, Fall 2020
  Discover Computer Science (EECS 110/198)
- **Prefect** at Carleton College   Spring 2014, Fall 2015, Winter 2016
  Mathematics of Computer Science (CS 202)
- **Prefect** at Carleton College   Winter 2015, Spring 2015
  Data Structures (CS 201)

Mentorship

- Krithika Malayarasan (Undergraduate at University of Michigan)   Fall 2022-Present
  Sentiment in Discussions of Computer Science Courses
- Vanita Sharma (Undergraduate at University of Michigan)   Fall 2021-Winter 2022
  Annotator Gender Bias in NLP Benchmarks
- Yujian Liu (Master's Student at University of Michigan)   Winter 2021-Winter 2022
  Temporal Effects in Depression Classification Methods
- Axel Avram (High School Student)   Summer 2020-Fall 2020
  Inter-country Sentiment During COVID-19
- Shiyu Qu (Undergraduate at University of Michigan)   Fall 2019-Winter 2020
  Location Embeddings from Reddit
- Camilo Muñoz (Master's Student at University of Waterloo)   Winter 2018
  Ads API Team Intern at Pinterest

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   September 2022
  University of Manchester NLP Journal Club (Invited Talk)
- IBM @ TREC CT-Track 2021   November 2021
  Text REtrieval Conference (Conference Talk)
- Towards Understanding Mental Health with Passively Collected Data   October 2021
  Carleton College (Invited Talk)

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   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   July 2020
  NLP COVID-19 Workshop at ACL
- The Applicability of Embeddings to Location Time Series Data   May 2019
  Midwest Speech and Language Days

Organizing Committees

- Conference of the European Chapter of the Association for Computational Linguistics (EACL) Publicity Chair   2023
- Workshop on NLP for Positive Impact (NLP4PI)   2022

Reviewing

- ACL Rolling Review   2021-Present
- EMNLP   2023 (Area Chair)
- ACL   2021, 2023
- SIGCSE Technical Symposium   2022
- Natural Language Processing and Computational Social Science Workshop (@EMNLP)   2020, 2022
- CLPsych Workshop (@NAACL)   2022
- NLP for Positive Impact Workshop (@ACL)   2021
- SocialNLP Workshop (@NAACL)   2021
- ACII   2021

VOLUNTEER ACTIVITIES

- ECSEL+ Treasurer   Fall 2021–Summer 2022
  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   July 2019
  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, 2023
- 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