Minhwa Lee

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Education

M.S. Computer Science, University of Massachusetts Amherst, MA USA 2021-2023

B.A. Computer Science & Mathematics, The College of Wooster, OH USA 2017-2021

Research Areas

Natural Language Processing, Computational Epidemiology, Human-AI Collaboration

Publications

(Note: Please visit my Google Scholar profile for the most recent updates. * denotes equal contribution.)

Conference

2024 S.A. Hayati, **M. Lee**, D. Rajagopal, and D. Kang. "How Far Can We Extract Diverse Perspectives from Large Language Models?". **EMNLP 2024**.

2024 R. Koo, **M. Lee**, V. Raheja, J.I. Park, Z.M. Kim, and D. Kang. "Benchmarking Cognitive Biases in Large Language Models as Evaluators". **ACL 2024 Findings**.

2024 V. Deshpande, **M. Lee**, Z. Yao, Z. Zhang, J.B. Gibbons, and H. Yu. "LocalTweet to LocalHealth: A Mental Health Surveillance Framework Based on Twitter Data". **LREC-COLING 2024**.

2023 S. Kwon, R. Garodia, **M. Lee**, Z. Yang and H. Yu. "Vision Meets Definitions: Unsupervised Visual Word Sense Disambiguation Incorporating Gloss Information". **ACL 2023**.

Workshop

2024 **M. Lee**, Z.M. Kim, V. Khetan, and D. Kang. "Human-AI Collaborative Taxonomy Construction: A Case Study in Profession-specific Writing Assistants". **The 3rd In2Writing Workshop @ CHI 2024**.

Preprint

2025 L.Wang*, **M.Lee***, R. Volkov, L.T.Chau, D.Kang. "ScholaWrite: A Dataset of End-to-end Scholarly Writing. **arXiv**. 2025.

2024 Y.Zhang*, **M.Lee***, J.B.Gibbons, HY Chen, Z. Yao, Y. Wang, O.Bennett, F. Ouyang, D. Levy, K.L.Tucker, and H.Yu. "Socioeconomic and Geographic Disparities in Accessibility to Food Pantries in the United States". ***Under Review by Nature Scientific Reports***. 2024.

2024 D.Das*, K.D. Langis*, A. Martin*, J. Kim*, **M. Lee***, Z.M. Kim*, S.A. Hayati, R. Owan, B. Hu, R.S. Parkar, R. Koo, J.I. Park, A. Tyagi, L. Ferland, S. Roy, V. Liu, and D. Kang. "Under the Surface: Tracking the Artifactuality of LLM-Generated Data". **arXiv**. 2024.

Research Experience

2024– **Full-time Research Staff @ UMass Lowell** supervised by *Prof. Hong Yu*
(1) Leading research projects in computational epidemiology (e.g., statistical modeling for health risk factors), expert-AI collaboration, and alignment in healthcare settings to ensure robust, ethical, and effective doctor/patient-AI relationships using large language models (LLMs).

(2) Organizing research group events and managing key administrative tasks to foster collaboration and productivity across students and faculty.

2023–2024 **Full-time Visiting Researcher @ University of Minnesota** advised by *Prof. Dongyeop Kang*
(1) Evaluation of Large Language Models (LLMs) compared to human reasoning on several downstream tasks, such as cognitive bias benchmark, diverse opinion generation about socially argumentative topics, and preference decision-making.

(2) Design, develop, and evaluate human-AI collaborative decision-making systems focusing on human-AI interaction framework, especially human writing tasks.

2021–2023 **Graduate Student Researcher @ UMass Amherst** advised by *Prof. Hong Yu*
Data science applications for utilizing social media to reduce disparities in public healthcare accessibility among socially vulnerable people in the U.S., focusing on mental health and food insecurity.

Awards & Scholarship

Awards and Honors

2021 Magna Cum Laude, The College of Wooster

2021 Departmental Honors (Computer Science, Mathematics), The College of Wooster

2021 The Vivien Chan Prize in Interdisciplinary Sciences, The College of Wooster

2019- Pi Mu Epsilon Induction, The College of Wooster

2018-2021 Dean's List, The College of Wooster

Scholarship & Fellowships

2021 Grace Hopper Celebration Student Scholarship

2017-2021 Wooster International Merit Scholarship ($38,000/yr)

Teaching Experience

Spring 2022 Introduction to Simulation (COMPSCI 550), UMass Amherst

Spring 2021 Introduction to Statistics (DATA 102), The College of Wooster

Fall 2019 Multimedia Computing (CSCI 102), The College of Wooster

Academic Service

2024 – Reviewer, **AMIA Clinical Informatics 2025**

2024 – Reviewer, **ACL ARR**, **NAACL 2025**, **ACL 2024**, **EMNLP 2024**, **ICLR 2025**

Professional Employment

Dec. 2024 – **Research Scientist** @ US Veterans Affairs Bedford Healthcare System, Bedford, MA

Aug. 2024 – **Full-time Research Staff** @ University of Massachusetts Lowell, Lowell, MA

Jul. 2023 – Jul. 2024 **Visiting Researcher** @ University of Minnesota, Minneapolis, MN

Jan. – Feb. 2023 **Data Scientist Intern - NLP** @ Microsoft, Cambridge, MA

Jan. – May. 2022 **Student Researcher** @ Bloomberg LP, Remote, MA

Technical & Research Skills

AI/ML: Python (Pytorch, transformers, statsmodels, scikit-learn, langchain), R
Web Development: HTML/CSS, JavaScript, Bootstrap, React, MongoDB, Flask, Git
HCI Research Skills: User Studies, Survey Design, IRB Documentation, Semi-structured Interview

Updated February 2025