Andrew Lee

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Google Scholar: Link

Research Natural Language Processing, Interpretability, Language Models, Dialogue, Grounding,

Interests Computational Social Science

Education **University of Michigan** Ann Arbor, MI

> Ph.D. Candidate in Computer Science 2020 - Present

Advisor: Rada Mihalcea

University of Michigan Ann Arbor, MI 2015

Master's in Computer Science

Northwestern University Evanston, IL Bachelor of Science in Computer Science 2013

Publications N. Nanda*, A. Lee*, M. Wattenberg. 2023. Emergent Linear Representations in World Models of Self-Supervised Sequence Models. Pre-print.

> O. Ignat, Z. Jin, A. Abzaliev, L. Biester, S. Castro, N. Deng, X. Gao, A. Gunal, J. He, A. Kazemi, M. Khalifa, N. Koh, A. Lee, S. Liu, D.J. Min, S. Mori, J. Nwatu, V. Perez-Rosas, S. Shen, Z. Wang, W. Wu, R. Mihalcea. 2023. A PhD Student's Perspective on Research in NLP in the Era of Very Large Language Models. Pre-print.

A. Lee, J. K. Kummerfeld, L. An, R. Mihalcea. 2023. Empathy Identification Systems are not Accurately Accounting for Context. European Chapter of the Association for Computational Linguistics (EACL).

A. Lee, D. Wu, E. Dinan, M. Lewis. 2022. Improving Chess Commentaries by Combining Language Models with Symbolic Reasoning Engines. Pre-print

A. Lee, Z. Chen, K. Leach, J. Kummerfeld. 2022. Augmenting Task-Oriented Dialogue Systems with Relation Extraction. In Proceedings of the 10th Dialog System Technology Challenges (AAAI Workshop).

A. Lee, J. K. Kummerfeld, L. An, R. Mihalcea. 2021. Micromodels for Efficient, Explainable, and Reusable Systems: A Case Study on Mental Health. Findings of Empirical Methods in Natural Language Processing (Findings of EMNLP).

S. Larson, A. Mahendran, J. J. Peper, C. Clarke, A. Lee, P. Hill, J. K. Kummerfeld, K. Leach, M. A. Laurenzano, L. Tang and J. Mars. 2019. An Evaluation Dataset for Intent Classification and Out-of-Scope Prediction. Empirical Methods in Natural Language Processing (EMNLP).

S. Larson, A. Mahendran, A. Lee, J. K. Kummerfeld, P. Hill, M. Laurenzano, J. Hauswald, L. Tang, J. Mars. 2019. Outlier Detection for Improved Data Quality and Diversity in Dialog Systems. North American Chapter of the Association for Computational Linguistics (NAACL).

^{*} Equal Contribution

Experience Meta AI Research

Research Intern - RAM (Reasoning, Attention, Memory) Team May 2023 - August 2023

New York, NY

Advisors: Jing Xu, Jason Weston

Meta AI Research New York, NY

Research Intern - Diplomacy Team May 2022 - August 2022

Advisors: Mike Lewis, Emily Dinan

Microsoft Research Redmond, WA

Research Intern - KTX Team May 2021 - August 2021

Advisor: Silviu-Petru Cucerzan

Cline, Inc. Ann Arbor, MI

Core AI R&D - Senior Software Engineer, Team Lead June 2019 - August 2020

Core AI R&D - Software Engineer June 2017 - June 2019

Ford Motor Company Dearborn, MI

Software Engineer March 2016 - June 2017

Patents Systems and methods for constructing an artificially diverse corpus of training data samples for training a contextually-biased model for a machine learning-based dialogue system.

A. Lee, S. Larson, C. Clarke, K. Leach, J. Kummerfeld, P. Hill, J. Hauswald, M. Laurenzano, L. Tang, J. Mars.

US Patent 10,796,104. 2020.

Systems and methods for automatically configuring training data for training machine learning models of a machine learning-based dialogue system including seeding training samples or curating a corpus of training data based on instances of training data identified as anomalous. S. Larson, A. Mahendran, A. Lee, J. Kummerfeld, P. Hill, M. Laurenzano, J. Hauswald, L.

Tang, J. Mars.

US Patent 10,679,150. 2020.

Awards Excellence in Climate, Diversity, Equity, and Inclusion

2023 - Award given to 5 students in the Computer Science and Engineering department for one's

commitment and action in increasing diversity, equity, and inclusion in the division.

University of Michigan CSE Research Honors AI Lab Nominee

Professional ACL - Association for Computational Linguistics

Services 2021, 2022 - ACL Rolling Review

CLPsych - Workshop on Computational Linguistics and Clinical Psychology (@NAACL)

2022 - Organizing Committee

2021 - Volunteer

CBO - International Symposium on Code Generation and Optimization

2019 - Program Committee

References Available upon request.