HAN LIU

🌐 https://HanLiuAI.github.io   ✉ hanliu@uchicago.edu

EDUCATION

The University of Chicago   September 2020 - Present
Ph.D. student in Computer Science
Advisor: Prof. Chenhao Tan

University of Colorado Boulder (transferred out)   August 2019 - July 2020
Ph.D. student in Computer Science
Advisor: Prof. Chenhao Tan

Washington University in St. Louis   August 2015 - May 2019
B.A. in Mathematics, Computer Science
Minor in Linguistics

RESERACH EXPERIENCE

Chicago Human+AI Lab   August 2019 - Present
Research Assistant (Advisor: Prof. Chenhao Tan)   *Chicago, IL*

- Design interactive explanations of machine learning models and study how humans behave with the aid of different types of explanations
- Study how human and AI collaborate under the effect of distribution shift in various decision making tasks such as deceptive review detection, profession classification, and recidivism prediction.

Neural Polysynthetic Language Modeling
at the Sixth Frederick Jelinek Memorial Summer Workshop (JSALT)   June - August 2019
Research Intern   *Montréal, QC, Canada*

- Trained morpheme-aware RNN language models for polysynthetic languages.
- Converted language models to TensorFlow Lite and built back-end service on Android Simulator.
- Built mobile keyboards with predictive text logic using LatinIME open source package.

PUBLICATIONS

"Why is 'Chicago' deceptive?" Towards Building Model-Driven Tutorials for Humans
Vivian Lai, **Han Liu**, and Chenhao Tan. *In Proceedings of the ACM CHI Conference on Human Factors in Computing Systems 2020 (CHI 2020).*

Morphology Matters: A Multilingual Language Modeling Analysis
Hyunji Hayley Park, Katherine J. Zhang, Coleman Haley, Kenneth Steimel, **Han Liu**, Lane Schwartz
Transactions of the Association for Computational Linguistics, 9. (TACL 2021) (To appear)

Neural Polysynthetic Language Modelling (Technical Report)
Lane Schwartz, Francis Tyers, Lori Levin, Christo Kirov, Patrick Littell, Chi-kiu Lo,
Emily Prud'hommeaux, Hyunji Hayley Park, Kenneth Steimel, Rebecca Knowles, Jeffrey Micher,
Lonny Strunk, **Han Liu**, Coleman Haley, Katherine J. Zhang, Robbie Jimmerson, Vasilisa Andriyanets,
Aldrian Obaja Muis, Naoki Otani, Jong Hyuk Park, and Zhisong Zhang. *Final report of the Sixth Frederick Jelinek Memorial Summer Workshop. arXiv preprint arXiv:2005.05477.*

Quantifying the polymerization dynamics of plant cortical microtubules using kymograph analysis
Benjamin Zhou, **Han Liu**, Tao Ju, and Ram Dixit. *Methods in Cell Biology, 160. (2020)*

TEACHING EXPERIENCE

Teaching assistant for the following courses:

CMSC 15200: Introduction to Computer Science II (UChicago, Fall 2020)

CSCI 5622: Machine Learning (CU Boulder, Fall 2019)

CSE 559A: Computer Vision (WUSTL, Fall 2018)

CSE 511A: Introduction to Artificial Intelligence (WUSTL, Fall 2018)

CSE 247: Data Structures and Algorithms (WUSTL, Fall 2017)

AWARDS

NAACL Scholarship for The Undergraduate Summer School at The 2019 Annual Jelinek Memorial Workshop On Speech And Language Technology (JSALT)   Top 12.5%, Summer 2019

TECHNICAL SKILLS

Programming: Python(6 years), R(3 years), Java, C/C++, MATLAB

Software & Package: PyTorch, TensorFlow, Scikit-learn, NumPy, Pandas