Li “Harry” Zhang

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RESEARCH INTERESTS

Artificial Intelligence, Machine Learning, Natural Language Processing
Large Language Models, Planning, Reasoning, Agents, Formal Methods, etc.

ACADEMIC AFFILIATIONS

Drexel University, Philadelphia, PA — Dec 2024 – Present
Tenure-Track Assistant Professor

University of Pennsylvania, Philadelphia, PA — Aug 2019 – Aug 2024
Ph.D. Computer and Information Science — GPA: 3.96/4.00
Adviser: Prof. Chris Callison-Burch
Thesis: *Structured Event Reasoning with Large Language Models*
Committee: Prof. Dan Roth (chair), Prof. Rada Mihalcea, Prof. Graham Neubig, Prof. Mark Yatskar, Dr. Marianna Apidianaki

University of Michigan, Ann Arbor, MI — Aug 2015 – Dec 2018
B.S.E. Computer Science, summa cum laude — GPA: 3.82/4.00
Mentors: Prof. Rada Mihalcea and Prof. Dragomir Radev

PUBLICATIONS

27 papers published in top NLP/AI conferences and workshops
⊃ 13 first-authored by self ∪ 8 first-authored by advised or mentored students.
Total citations: 3000+; h-index: 15+
(*Equal contribution; ^Mentored students)

[34] Y. Yuan, M. He, A. Shahid, J. Huang, Z. Li, **L. Zhang**. TurnaboutLLM: A Deductive Reasoning Benchmark from Detective Games. Submitted to EMNLP 2025.

[33] L. Gong, W. Zhu, J. Thomason and **L. Zhang**. Zero-Shot Iterative Formalization and Planning in Partially Observable Environments. Submitted to AAAI 2026.

[32] P. Kagitha and **L. Zhang**. Addressing the Challenges of Planning Language Generation. Submitted to EMNLP 2025.

[31] W. Hu, J. Duan, C. Wei, **L. Zhang**, Y. Zhang and K. Xu. DynaCode: A Dynamic Complexity-Aware Code Benchmark for Evaluating Large Language Models in Code Generation. In Findings of ACL 2025.

[30] C. Huang and **L. Zhang**. On the Limit of Language Models as Planning Formalizers. In ACL 2025.

[29] **L. Zhang**, P. Jansen, P. Clark, C. Callison-Burch and N. Tandon. PDDLEGO: Iterative Planning in Textual Environments. In *SEM 2024.

[28] T. Zhang*^, **L. Zhang***, Z. Hou^, Z. Wang^, Y. Gu, P. Clark, C. Callison-Burch and N. Tandon. PROC2PDDL: Open-Domain Planning Representations from Texts. In the 2nd Natural Language Reasoning and Structured Explanations Workshop at ACL 2024.

[27] Q. Lyu, K. Shridhar, C. Malaviya, **L. Zhang**, Y. Elazar, N. Tandon, M. Apidianaki, M. Sachan and C. Callison-Burch. Calibrating Large Language Models with Sample Consistency. In AAAI 2025; **Area Chair Award**.

[26] Y. Lal, **L. Zhang**, F. Brahman, B. Majumder, Peter Clark and N. Tandon. One Size Does Not Fit All: Customizing Open-Domain Procedures. In Findings of ACL 2024.

[25] B. Majumder, B. Dalvi, P. Jansen, O. Tafjord, N. Tandon, **L. Zhang** and C. Callison-Burch, Peter Clark. CLIN: A Continually Learning Language Agent for Rapid Task Adaptation and Generalization. In COLM 2024.

[24] Z. Hou^, **L. Zhang** and C. Callison-Burch. *Choice-75: A Dataset on Decision Branching in Script Learning*. In LREC-COLING 2024.

[23] **L. Zhang**, H. Xu^, A. Kommula, N. Tandon and C. Callison-Burch. *OpenPI2.0: An Improved Dataset for Entity Tracking in Texts*. In EACL 2024.

[22] **L. Zhang***, L. Dugan*, H. Xu*^ and C. Callison-Burch. *Exploring the Curious Case of Code Prompts*. In preprint. In the 1st Natural Language Reasoning and Structured Explanations Workshop at ACL 2023.

[21] T. Zhang^, I. Tham, Z. Hou^, Jia. Ren, L. Zhou, H. Xu^, **L. Zhang**, L. Martin, R. Dror, S. Li, H. Ji, M. Palmer, S. Brown, R. Suchocki, C. Callison-Burch. *Human-in-the-Loop Schema Induction*. In preprint; in ACL 2023 Demos.

[20] Q. Lyu*, S. Havaldar*, A. Stein*, **L. Zhang**, D. Rao, E. Wong, M. Apidianaki and C. Callison-Burch. *Faithful Chain of Thought Reasoning*. In IJCNLP-AACL 2023.

[19] **L. Zhang***, H. Xu*^, Y. Yang, S. Zhou, W. You, M. Arora and C. Callison-Burch. *Causal Reasoning of Entities and Events in Procedural Texts*. In Findings of EACL 2023.

[18] **L. Zhang** and C. Callison-Burch. *Language Models are Drummers: Drum Composition with Natural Language Pre-Training*. In 1st Workshop on Creative AI across Modalities at AAAI 2023.

[17] Y. M. Cho^, **L. Zhang** and C. Callison-Burch. *Unsupervised Entity Linking with Guided Summarization and Multiple Choice Selection*. In EMNLP 2022.

[16] S. Gehrmann, …, **L. Zhang**, …, H. Zhu, S. Brahma, Y. Li, ... *GEMv2: Multilingual NLG Benchmarking in a Single Line of Code*. In EMNLP 2022.

[15] A. Srivastava, …, **L. Zhang**, Q. Lyu and C. Callison-Burch, … *Beyond the Imitation Game: Quantifying and extrapolating the capabilities of language models.* In TMLR.

[12] Q. Lyu, H. Zheng, D. Li, **L. Zhang**, M. Apidianaki, and C. Callison-Burch. *Is "my favorite new movie" my favorite movie? Probing the Understanding of Recursive Noun Phrases*. In NAACL 2022.

[11] **L. Zhang**, I. Jindal and Y. Li. *Label Definitions Improve Semantic Role Labeling*. In NAACL 2022.

[10] **L. Zhang***, S. Zhou*, Q. Lyu, Y. Yang, G. Neubig and C. Callison-Burch. *Show Me More Details: Discovering Event Hierarchies from WikiHow*. In ACL 2022.

[9] Y. Yang, A. Panagopoulou, Q. Lyu, **L. Zhang**, M. Yatskar and C. Callison-Burch. *Visual Goal-Step Inference using wikiHow*. In EMNLP 2021; presented at the 2nd Workshop on Advances in Language and Vision Research at NAACL 2021.

[8] **L. Zhang***, Q. Lyu* and C. Callison-Burch. *Goal-Oriented Script Construction*. In INLG 2021.

[7] **L. Zhang**, Q. Lyu and C. Callison-Burch. *Intent Detection with WikiHow*. In AACL-IJCNLP 2020.

[6] **L. Zhang***, Q. Lyu* and C. Callison-Burch. *Reasoning about Goals, Steps, and Temporal Ordering with WikiHow*. In EMNLP 2020; presented at Workshop on Enormous Language Models at ICLR 2021.

[5] **L. Zhang**, H. Zhu, S. Brahma and Y. Li. *Small but Mighty: New Benchmarks for Split and Rephrase*. In EMNLP 2020.

[4] **L. Zhang**, S. R. Wilson and R. Mihalcea. *Multi-Label Transfer Learning for Semantic Similarity*. In *SEM 2019 and presented at NAACL 2019.

[1] C. Finegan-Dollak, J. K. Kummerfeld, **L. Zhang**, K. R. D. Ramanathan, S. Sadasivam, R. Zhang and D. Radev. *Improving Text-to-SQL Evaluation Methodology.* In ACL 2018.

External Funding

Alexa Prize TaskBot Challenge ($250,000) 2021 - 2022

Amazon Seattle, WA

• Primarily authored, applied, and received a stipend award of $250,000 to lead University of Pennsylvania's effort in the Alexa Prize TaskBot Challenge 2021.

INDUSTRY EXPERIENCE

Research Intern Apr 2023 – Dec 2023
Allen Institute for Artificial Intelligence (AI2) Seattle, WA

Research Intern Apr 2019 – Jun 2019; May 2021 – Aug 2021
IBM Research San Jose, CA

Software Engineer Intern May 2017 – Aug 2017
Goldman Sachs Group, Inc. Jersey City, NJ

ACADEMIC SERVICE

Chair

• Area Chair:
AACL 2025, EMNLP 2025, ACL 2025, ACL 2024, EMNLP 2024, COLING 2024

• Program Chair:
Mid-Atlantic Student Colloquium on Speech, Language and Learning (MASC-SLL) 2023

• Program Chair:
1st Workshop on Data Science with Human in the Loop at EMNLP 2022 2022

• Session Chair:
Asia-Pacific Chapter of the Association of Computational Linguistics (AACL) 2020

Reviewer

• Association of Computational Linguistics (ACL) recurring
• North American Chapter of ACL (NAACL) recurring
• Empirical Methods in Natural Language Processing (EMNLP) recurring
• Association for the Advancement of Artificial Intelligence (AAAI) recurring
• Conference on Language Modeling (COLM) recurring
• International Conference on Language Resources and Evaluation (LREC) recurring
• International Conference on Computational Linguistics (COLING) recurring
• Computer Speech and Language (CSL) journal. recurring

TEACHING

Instructor — Applied Natural Language Processing Apr 2025 – Jun 2025
CS T780: The graduate level NLP course Drexel University

Teaching Assistant — Computational Linguistics Jan 2020 – Dec 2020
CIS 530: The graduate level NLP course University of Pennsylvania

Teaching Assistant — Natural Language Processing Sept 2018 – Dec 2018
EECS 595: The graduate level NLP course University of Michigan

Teaching Assistant — Programming and Data Structures Sept 2016 – Apr 2017
EECS 280: An introductory programming course University of Michigan

Tutor — Elementary Chemistry Sept 2016 – Dec 2016
Science Learning Center University of Michigan

ADVISING

PhD Students

Cassie Huang Jan 2025 – present

Master Students

Prabhu Prakash Kagitha Feb 2025 – present
Ceyhun Efe Kayan Apr 2025 – present

Undergraduate Students

Rikhil Amonkar	Feb 2025 – present
Stuti Mohan	Jun 2025 – present

Interns and Visiting Students

Muyu He	Mar 2025 – present
Yuan Yuan	Sep 2024 – present
Renxiang Wang	Apr 2025 – present

Alumni and Past Students

Krystal Gong, Tianyi Zhang, Hainiu Xu, Zhaoyi Hou, Young-Min Cho