

# Zeyu Leo Liu

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## CONTACT INFORMATION

Email: [leo.liuzeyu@gmail.com](mailto:leo.liuzeyu@gmail.com)  
<https://leo-liuzy.github.io/>

## EDUCATION

**The University of Texas at Austin** August 2023 — June 2028 (Expected)  
Ph.D. in Computer Science  
Advisor: { Eunsol Choi, Greg Durrett }  
**University of Washington, Seattle** September 2017 — March 2023  
B.S./M.S. in Computer Science Noah A. Smith and Shane Steinert-Threlkeld

## RESEARCH INTEREST

Natural Language Processing, specifically focusing on **Continual Learning, Pretraining, Code Generation, and Reasoning.**

## INDUSTRY EXPERIENCE

**Salesforce AI**, Research Internship May – August 2025  
Host: Yingbo Zhou  
• Efficient and Structured Reasoning: Propose a new reasoning format and build a parser to turn R-1 style reasoning trace into directed-acyclic graph. Supervised finetuning the model to output structured reasoning trace, improving the interpretability and monitor-ability of reasoning.  
**Meta AI, FAIR Accelerator**, AI Resident September 2021 – September 2022  
Host: Xian Li, Ves Stoyanov  
• Pretraining Mixture-of-Expert LLM: Analyze existing sparsely activated memory and a new architectural design to enable more efficient pretraining of Sparse MoE LLMs.  
**Allen Institute for Artificial Intelligence (AI2)**, Software Engineer January – March 2021  
Host: Pete Walsh

## FIRST-AUTHORED PUBLICATIONS

- \* = equal contribution,  $\alpha$  = sorted alphabetically or randomly
- [1] **PropMEND: Hypernetworks for Knowledge Propagation in LLMs**  
**Zeyu Leo Liu**, Greg Durrett, Eunsol Choi  
*arXiv 2025.*
  - [2] **CodeUpdateArena: Benchmarking Knowledge Editing on API Updates**  
**Zeyu Leo Liu**, Shrey Pandit, Xi Ye, Eunsol Choi, Greg Durrett  
*arXiv 2024.*
  - [3] **Towards A Unified View of Sparse Feed-Forward Network in Transformer**  
**Leo Z. Liu**, Tim Dettmers, Xi Victoria Lin, Veselin Stoyanov, Xian Li  
*The 2023 Conference on Empirical Methods in Natural Language Processing(EMNLP)*, 2023.
  - [4] **Probing Across Time: What Does RoBERTa Know and When?**  
**Leo Z. Liu\***, Yizhong Wang\*, Jungo Kasai, Hannaneh Hajishirzi, Noah A. Smith  
*EMNLP Finding and EMNLP BlackboxNLP Workshop (Poster)*, 2021.
  - [5] **Linguistically-Informed Transformations (LIT): A Method for Automatically Generating Contrast Sets**  
Chuanrong Li $^{\alpha}$ , Lin Shengshuo $^{\alpha}$ , **Leo Z. Liu $^{\alpha}$** , Xinyi Wu $^{\alpha}$ , Xuhui Zhou $^{\alpha}$ , Shane Steinert-Threlkeld  
*EMNLP BlackboxNLP Workshop (Poster)*, 2020.

## OTHER REFEREED PUBLICATIONS

- \* = equal contribution,  $\alpha$  = sorted alphabetically or randomly
- [1] **Learning Composable Chains-of-Thought**  
Fangcong Yin, **Zeyu Leo Liu**, Liu Leqi, Xi Ye, and Greg Durrett  
*NeurIPS 2025 Foundations of Reasoning in Language Models (FoRLM) Workshop*  
*arXiv 2025.*

- [2] **ChartMuseum: Testing Visual Reasoning Capabilities of Large Vision-Language Models**  
 Liyan Tang, Grace Kim, Xinyu Zhao, Thom Lake, Wenxuan Ding, Fangcong Yin, Prasann Singhal, Manya Wadhwa, **Zeyu Leo Liu**, Zayne Sprague, Ramya Namuduri, Bodun Hu, Juan Diego Rodriguez, Puyuan Peng, and Greg Durrett  
 Proceedings of NeurIPS Datasets and Benchmarks Track 2025
- [3] *OpenAgents: An Open Platform for Language Agents in the Wild*  
 Tianbao Xie, Fan Zhou, Zhoujun Cheng, Peng Shi, Luoxuan Weng, Yitao Liu, Toh Jing Hua, Junning Zhao, Qian Liu, Che Liu, **Leo Z. Liu**, Yiheng Xu, Hongjin Su, Dongchan Shin, Caiming Xiong, Tao Yu  
*ICLR 2024 Workshop on Large Language Model (LLM) Agents COLM 2024*.
- [4] *Learning to translate by learning to communicate*  
 C.M. Downey\*, Xuhui Zhou\*, **Leo Z. Liu**, Shane Steinert-Threlkeld  
 The 3rd Workshop on Multilingual Representation Learning @ EMNLP, 2023.
- [5] *Emergent Communication Fine-tuning (EC-FT) for Pretrained Language Models*  
 Shane Steinert-Threlkeld, Xuhui Zhou, **Leo Z. Liu**, C. M. Downey  
*ICLR EmeCom Workshop (Runner-up Best Paper)*, 2022.

ACADEMIC  
RESEARCH  
EXPERIENCE

<b>XLANG Lab</b> <i>Research Assistant</i> , with Tao Yu	2023
<b>USC Information Science Institute, Natural Language Group</b> <i>Research Intern</i> , with Xuezhe Ma (Max) and Jonathan May	Summer 2021
<b>University of Washington, Noah’s Ark</b> <i>Research Assistant</i> , with Noah A. Smith, Yizhong Wang, and Jungo Kasai	2019 – 2023
<b>University of Washington, CLMBR</b> <i>Research Assistant</i> , with Shane Steinert-Threlkeld	2020 – 2023

PROFESSIONAL  
SERVICE

<b>Program Committee Member:</b>
<ul style="list-style-type: none"> <li>• International Conference on Learning Representations (ICLR): 2025, 2026</li> <li>• Conference on Neural Information Processing Systems (NeurIPS): 2025</li> <li>• Association for Computational Linguistics (ACL): 2025(Demo)</li> <li>• Conference on Language Modeling (COLM): 2024, 2025</li> <li>• Conference on Empirical Methods in Natural Language Processing (EMNLP): 2022, 2023</li> <li>• Transactions on Machine Learning Research (TMLR): 2024</li> <li>• Workshop on Simple and Efficient Natural Language Processing (SustaiNLP): 2021</li> <li>• Instruction Workshop @ NeurIPS: 2023</li> </ul>
<b>Student Volunteer:</b>
<ul style="list-style-type: none"> <li>• Conference on Empirical Methods in Natural Language Processing (EMNLP): 2020</li> <li>• Annual Meeting of the Association for Computational Linguistics (ACL): 2020</li> </ul>

AWARDS &  
HONORS

UTCS Graduate Research Assistant (GRA) Fellowship 2023 — 2028  
 Runner-up Best Paper, ICLR Workshop on EmeCom Workshop, 2022 [5]  
 Citadel UW Datathon 2nd Place \$2500, 2018  
 Dean’s List, 2017 — 2020

DEPARTMENTAL  
SERVICE

<b>UTCS DiRP mentor</b> , The University of Texas at Austin	Spring 2024
Lead weekly reading group and introduce modern (post transformer) Natural Language Processing techniques to undergraduate students.	

TEACHING

<b>CSE 447: Natural Language Processing</b> , University of Washington	Winter 2023
<b>CSE 447: Natural Language Processing</b> , University of Washington	Autumn 2022

<b>CSE 5/446: Machine Learning</b> , University of Washington	Spring 2021
<b>CSE 5/446: Machine Learning</b> , University of Washington	Autumn 2020
<b>CSE 5/446: Machine Learning</b> , University of Washington	Spring 2020
<b>CSE 5/446: Machine Learning</b> , University of Washington	Autumn 2019
<b>CSE 446: Machine Learning</b> , University of Washington	Spring 2019