

Yanchen Liu

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EDUCATION

Harvard University

2022 - Present

MS in Data Science

Cross-Registration in Computer Science at [MIT](#)

Advisors: Prof. Jiaqi Ma and Prof. Himabindu Lakkaraju

Technical University of Munich

2018 - 2022

BS in Computer Science with Highest Honors

Minor in Computational Linguistics at [Ludwig Maximilian University](#)

Advisors: Timo Schick and Prof. Hinrich Schütze

Major GPA: 1.2/1.0 (3.97/4.0) Minor GPA: 1.0/1.0 (4.0/4.0)

Rank: **top 1%** with most courses passed with full scores (1.0/A+), particularly in all math

ACHIEVEMENTS

[best.in.tum](#)

Apr. 2020

promotion of the best students

TU Munich, DE

PUBLICATIONS

- [1] [DADA: Dialect Adaptation via Dynamic Aggregation of Linguistic Rules](#)
Yanchen Liu, William Held, Diyi Yang
In Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing (EMNLP 2023)
- [2] [Task-Agnostic Low-Rank Adapters for Unseen English Dialects](#)
Zedian Xiao, William Held, **Yanchen Liu**, Diyi Yang
In Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing (EMNLP 2023)
- [3] [SMoA: Sparse Mixture of Adapters to Mitigate Multiple Dataset Biases](#)
Yanchen Liu*, Jing Yan*, Yan Chen*, Jing Liu, Hua Wu
In ACL Workshop on Trustworthy Natural Language Processing, 2022
- [4] [Semantic-Oriented Unlabeled Priming for Large-Scale Language Models](#)
Yanchen Liu, Timo Schick, Hinrich Schütze
In ACL Workshop on Simple & Efficient Natural Language Processing, 2022
Oral Presentation

PREPRINTS

- [5] [Confronting LLMs with Traditional ML: Fairness of Large Language Models in Tabular Classification](#)
Yanchen Liu, Srishti Gautam, Jiaqi Ma, Himabindu Lakkaraju
Under Review at NAACL 2024. The Short Version in NeurIPS 2023 Workshop on Socially Responsible Language Modelling Research (NIPSW 2023)
- [6] [Decoding Susceptibility: Modeling Misbelief to Misinformation Through a Computational Approach](#)
Yanchen Liu, Mingyu Derek Ma, Wenna Qin, Azure Zhou, Jiaao Chen, Weiyan Shi, Wei Wang, Diyi Yang
Under Review at NAACL 2024

RESEARCH EXPERIENCE

Stanford NLP Group

Visiting Research Assistant

Advisor: Prof. [Diyi Yang](#)

Oct. 2022 - Present

Palo Alto, CA

- ❑ Exploring a framework that leverages LLMs to assist humans in verifying and identifying non-standard linguistic features in a given text, as well as discovering new linguistic features and usages, demonstrating the potential of empowering linguistic research with LLMs.
- ❑ Proposed Dialect Adaptation via Dynamic Aggregation (DADA), a compositional and modular approach to enhance the dialectal robustness of models trained on Standard American English across multiple dialects simultaneously, from a finer-grained perspective to accommodate dialect flexibility [1]. And introduced HyperLoRA, a scalable, task-agnostic method that incorporates expert linguistic knowledge to enable resource-efficient dialect adaptation through the use of hypernetworks to disentangle dialect-specific and cross-dialectal information [2].
- ❑ Formulated a computational approach to model users' susceptibility to misinformation based on their online activities, using observable sharing behavior as a proxy, and enabling large-scale analysis of its correlation with social and psychological factors [6].

Harvard AI4LIFE Group

Research Assistant

Advisor: Prof. [Himabindu Lakkaraju](#)

Mar. 2023 - Present

Cambridge, MA

- ❑ Analyzed how LLMs exhibit inherent social biases inherited from their pre-training corpora, and investigated the fairness implications of LLMs when making predictions on tabular data, in comparison with traditional machine learning models [5].

LMU Center for Information & Language Processing

Research Assistant

Advisor: Prof. [Hinrich Schütze](#)

Jun. 2021 - Nov. 2021

Munich, DE

- ❑ Proposed Semantic-Oriented Unlabeled Priming (Soup), a novel approach by retrieving and leveraging semantically similar unlabeled examples for enhancing the few-shot performance of pre-trained LMs. And introduced bag-of-contexts priming, a new priming strategy that is more suitable for this setting and enables the usage of more examples than fit into the context window [4].

TALKS

Stanford NLP Talk

Dynamic Aggregation and Auto-Discovery of Linguistic Features

Nov. 2023

Stanford NLP Lightning Talk

LLM for More Research: Empowering Linguistic and CSS Research with LLMs

Oct. 2023

MENTORING

[Rodrigo Nieto](#) (BS/MS Student, Stanford University)

Sep. 2023 - Present

[Azure Zhou](#) (BS Student, Stanford University)

Jun. 2023 - Present

[Mary Williamson](#) (MS Student, Stanford University)

Jun. 2023 - Sep. 2023

SKILLS

Programming Languages: C/C++, Java, Python, OCaml, Verilog, MIPS Assembly, SQL...

Language Proficiency: English - TOEFL 111, German - DSH2, Chinese - Native

Also hobbies: Soccer, Go (3 Dan)