

# ZHIWEI XU

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## EDUCATION

### University of Michigan

Ph.D. student, *Department of Statistics*

*Ann Arbor, U.S.*

*2022 - present*

### University of Science and Technology of China

Bachelor of Science, *Department of Statistics*

*Hefei, China*

*2018 - 2022*

## RESEARCH INTERESTS

My research interest is centered around large-scale inference and theoretical foundations of deep learning. Recently I'm also interested in theoretical and empirical understanding of large language models.

## PUBLICATIONS AND PREPRINTS

[4] Deciphering Grokking in Large Language Models: A Mechanical Perspective  
(In Progress)

**Zhiwei Xu**, Wei Hu, Yixin Wang

[3] [Benign Overfitting and Grokking in ReLU Networks for XOR Cluster Data](#)

**Zhiwei Xu**, Yutong Wang, Spencer Frei, Gal Vardi, Wei Hu

International Conference on Learning Representations (**ICLR**) 2024

[2] [Inference of Dependency Knowledge Graph for Electronic Health Records](#)

**Zhiwei Xu**, Ziming Gan, Doudou Zhou, Shuting Shen, Junwei Lu\*, Tianxi Cai\*

Submitted, 2023.

[1] [ARCH: Large-scale Knowledge Graph via Aggregated Narrative Codified Health Records Analysis](#)

Ziming Gan\*, Doudou Zhou\*, et al.

Submitted, 2023.

(Note: authors with \* contributed equally to the work)

## EXPERIENCES

### Harvard University

Visiting student, *Department of Biostatistics*

Advisor: Prof. Junwei Lu and Tianxi Cai

*Remote*

*May.2021 - May.2022*

## AWARDS AND HONORS

Excellent Graduate of USTC

Gold Prize for Outstanding Scholarship in USTC

Outstanding Volunteer Award

*May.2022*

*Oct.2019, 2020*

*Feb.2019*

## SKILLS

R, Python, C, PyTorch

## TALKS & PRESENTATIONS

NeurIPS [M3L](#) Workshop (oral presentation on publication [3])

Joint Statistical Meetings (poster presentation on preprint [2])

*Dec.2023*

*Aug.2023*