

Zhihan Zhou

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EDUCATION

Northwestern University

✧ Doctor of Philosophy, Computer Science (GPA: **4.0/4.0**) 09/2020 - Present

Advisor: Han Liu Research Area: Deep Learning, Language Models, Conversational AI

✧ Master of Science, Computer Science (GPA: **4.0/4.0**) 09/2018 - 06/2020

Zhejiang University

✧ Bachelor of Science, Mathematics and Applied Mathematics 09/2014 - 06/2018

PUBLICATIONS

✧ **Learning Dialogue Representations from Consecutive Utterances**

Zhihan Zhou, Dejiao Zhang, Wei Xiao, Nicholas Dingwall, Xiaofei Ma, Andrew Arnold, Bing Xiang

Proceedings of *NAACL 2022*

✧ **Trade the Event: Corporate Events Detection for News-based Event-driven Trading**

Zhihan Zhou, Liqian Ma, Han Liu

Proceedings of *ACL 2021, Findings*

✧ **DNABERT: Pre-trained Bidirectional Encoder Representation from Transformers for DNA Language Modeling in Genome**

Yanrong Ji, Zhihan Zhou*, Han Liu, Ramana V Davuluri (*: joint first author)*

Published on *Bioinformatics*, btob083, 2021

✧ **Few-shot Slot Tagging with Collapsed Dependency Transfer and Label-enhanced Task-adaptive Projection Network**

Yutai Hou, Wanxiang Che, Yongkui Lai, Zhihan Zhou, Yijia Liu, Han Liu, Ting Liu

Proceedings of *ACL 2020*

✧ **Joint Speaker Diarization and Recognition Using Convolutional and Recurrent Neural Networks**

Zhihan Zhou, Yichi Zhang, Zhiyao Duan

Proceedings of *ICASSP 2018*

✧ **ELLPMDA: ensemble learning and link prediction for miRNA-disease association prediction**

Xing Chen, Zhihan Zhou*, Yan Zhao (*: joint first author)*

Published on *RNA Biology*, 2018

PREPRINTS

✧ **Predicting Drug Repurposing Candidates and Their Mechanisms from A Biomedical Knowledge Graph**

Chunyu Ma, Zhihan Zhou, Han Liu, David Koslicki

Under review of *GigaScience*

WORK EXPERIENCE

Applied Scientist Intern @ Amazon Web Services

09/2021 – 12/2021

- ✧ Conduct an independent research project on Conversational AI.
- ✧ Perform large-scale contrastive conversational model pre-training to improve few-shot dialogue understanding.

Research Assistant @ MAGICS Lab, Northwestern University

01/2019 - Present

- ✧ Conducted multiple Research projects including but not limited to:
 - Drug Repurposing:** Exploit Graph Attention Network (GATs) to predict the relationships between drugs and diseases on a huge biologic knowledge graph which contains millions of nodes and tens of millions of edges.
 - Virus Genome Analysis:** Utilize Longformer-based language model to analyze the SARS_CoV_2 virus.
 - Time-Series Modeling:** Perform contrastive representation learning for time-series data.
 - Massive News Acquisition:** Build a system that acquires news articles in real-time from 10000+ websites.

ACADEMIC SERVICES

- ✧ Serve as Reviewer for: *NeurIPS*, *ICML*, *ICLR*, *ACL*, *EMNLP*, *NAACL*, *AISTATS*, etc.
- ✧ Serve as Teaching Assistant for:
 - CS 348: Introduction to Artificial Intelligence; CS 397: Seminar in Statistical Language Modeling; CS 496-6: Advanced Topics in Deep Learning, CS 496-9: Statistical Machine learning, CS 497: Deep Learning for Natural Language Processing, Stats 359: Data Science Project

SKILLS

- ✧ Programming languages: Python, Java, R, HTML, CSS
- ✧ Skills: Pytorch, AWS, Kubernetes, Docker, Linux