

# 何震宇 Zhenyu He

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Blog: <https://zhenyuhe00.github.io>

## Education

### University of Electronic Science and Technology of China

Sep 2019 - Jun 2023

School of Software Engineering

Chengdu, China

Major: Software Engineering (Elite Program)

GPA: 3.99/4, 90+/100      IELTS: 7

Courses: CS224n, CS224w, CS231n, CS229, Information theory and Entropy, Calculus I/II(93/96), Linear Algebra(93), Program Design and Algorithm Foundation I/II(100/100), Probability and Mathematical Statistics(93), Physics(94), Discrete Mathematics(92)

### Peking University

Sep 2023 - Jul 2027

School of Artificial Intelligence

## Publication

### Rumor Detection on Social Media with Event Augmentations, SIGIR 2021

Zhenyu He\*, Ce Li\*, Fan Zhou, Yi Yang

## Preprint

### Two-Stage Neural Contextual Bandits for Personalised News Recommendation

Mengyan Zhang, Thanh Nguyen-Tang, Fangzhao Wu, Zhenyu He, Xing Xie, Cheng Soon Ong

### Uni-Fold MuSSE: De Novo Protein Complex Prediction with Protein Language Models

Jinhua Zhu\*, Zhenyu He\*, Ziyao Li, Guolin Ke, Linfeng Zhang

## Research Experience

### Research Intern (remote), Peking University

Jan 2023 - Present

Advisor: Prof. Di He; Mentor: Shengjie Luo

Beijing, China

1. Deep learning for predicting atomic energies / forces / positions.

### Research Intern, DP Technology

Jun 2022 - Jan 2023

Mentor: Guolin Ke

Beijing, China

- Applied NLP techniques (pre-training) to protein modeling.

### Research Intern, Machine Learning Group, MSRA

Mar 2022 - Jun 2022

Mentor: Lijun Wu

Beijing, China

- Worked on Drug AI
- Introduce prompt tuning to molecule transformer.
- Introduce PUlearning techniques such as Mixup, label flip to Drug-Drug interactions.

### KEG, Tsinghua University

Jul 2021 - Jan 2022

Advisor: Jie Tang; Mentor: Xiao Liu

Beijing, China

- Worked closely with senior Ruixiao Yang on a project called "Language Model as Wikipedia". We aimed to make Language Model as knowledgeable as Wikipedia and tried many techniques. We tested performance on downstream Question-Context retrieval task and found that the top 2 retrieval accuracy of our radical method can be comparable to the top 1 retrieval accuracy of DPR. More details about this project can be found in our meeting document.
- Worked closely with postgraduate Xiao Liu on a project called "Never Ending Language World Knowledge Learning System". We aim to build a life-long learning system acquiring world knowledge. This project is a relatively huge project and more people are participating in it. As for my part, which is the extractor part, I reimplement the Prompt-Learning techniques on Language Models and train hundreds of continuous prompts for different relation extraction datasets. When conducting inference, I use some techniques to aggregate hundreds of prompts model as a joint model, so that

the model can extract all relations of a given context by only one "forward step". Project website <https://wudao.aminer.cn/newkg/>

#### CoAI, Tsinghua University (remote)

Apr 2021 - May 2021

Advisor: Prof.Minlie Huang

Beijing, China

- Worked closely with postgraduate Runze Liang and Senior Wenchang Ma on conversational AI.
- Read some papers about conversational AI.
- Starting from scratch, I devoted time to learning HTML, CSS, Javascript, and some basic knowledge of Vue. After 1~2 weeks, I successfully made a simple conversation page, using node.js as backend.

#### ICDM, University of Electronic Science and Technology of China

Nov 2020 - Jun 2021

Advisor: Prof.Fan Zhou

Chengdu, China

- Did research on rumor detection on social media and read many papers about this field.
- Read many papers about graph neural networks and contrastive learning.
- Proposed data augmentation strategies and integrated contrastive learning to achieve label-efficient learning in rumor detection. **A first-author SIGIR short paper was accepted.**

#### KE Lab, University of Electronic Science and Technology of China

Jul 2020 - Oct 2020

Advisor: Prof.Qiao Liu

Chengdu, China

- Did some research on session-based recommendation systems.
- Reproduced some models such as GRU, STAMP, and SR-GNN.

### Work Experience

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#### Applied Scientist Intern, Microsoft STCA

Jan 2022 - Feb 2022

- Worked as a machine learning engineer to improve the performance of recommendations, advertising, and searching.
- Worked on a research project about the exploit and exploration problem with Mengyan Zhang.

### Awards and Scholarship

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|--------------------------------|------|
| • SIGIR Student Travel Grant   | 2021 |
| • The First Prize Scholarship  | 2020 |
| • Midea Enterprise Scholarship | 2020 |

### Skills

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|----------------------------------|--------------------------------|
| • <b>Programming Language</b>    | Python, C, basic Java/HTML/CSS |
| • <b>Deep Learning Framework</b> | Pytorch                        |
| • <b>Miscellaneous</b>           | Latex, SQL, Markdown           |