# Zhenyu Lei

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Xi'an Jiaotong University (C9)

#### **EDUCATION**

## Xi'an Jiaotong University, Physics, bachelor

2019.9 - 2023.7

• Physics Experimental Class (Qian Xuesen Honor Science)

• GPA: 89.5/100 (3.82/4.3) • CET-4: 622 / CET-6: 589

#### RESEARCH EXPERIENCE

#### **LUD lab** Xi'an Jiaotong University

2021.9 - now

- Learn machine learning, basic knowledge of neural network and cutting-edge knowledge of natural language processing in this lab. Read several papers about machine question answering. Reproduce classic papers DPR. **Master basic research skills.**
- In the laboratory, advised by mentor Minnan Luo to conduct social network analysis research, during which time, participate in a paper on the detection of social media political stance "KCD: Knowledge Walks and Textual Cues Enhanced Political Perspective" published in NACCL 2022. Mainly discuss the design of ablation experiments and draw diagrams of the paper. Master the ability to cooperate, communicate and design papers.
- Write a paper on Twitter fake account detection as the first author "BIC: Twitter Bot Detection with Text-Graph Interaction and Semantic Consistency". In this paper, the method of image and text fusion is proposed for the first time for Twitter robot detection and a semantic consistency detection enhancement model is proposed. The paper is being submitted and under review. Master the ability to write essays in English.
- Participate as a co-second author on a paper on Twitter's fake account dataset "TwiBot-22: Towards Graph-Based Twitter Bot Detection". Mainly deal with some data collection and production and data set comparison experiments in existing fields. The paper will be published in NeurIPS 2023. Master the ability to process big data.
- During the time in the laboratory, chair a national-level entrepreneurship project on the detection of fake accounts in social networks.
   Master some management and coordination skills.

#### Lei Ming's lab Xi'an Jiaotong University

2020.10 - 2021.4

- During this lab, learn basic digital image processing theory, read several English papers on the propagation of relief grating light, and derived strict coupled wave equations and other scattering equations. Master a little theoretical research ability
- Follow the laboratory to design and implement a high-precision optical multi-cell UV microbeam instrument. Mainly participate in the design of some software interfaces. Deal with the writing of the manual and the writing of the "Tengfei Cup" work application form of Xi'an Jiaotong University. Master the ability to write manuals and documents.

## **Honors**

| Xi'an Jiaotong University Outstanding Sichuan Student Scholarship   | 2021 |
|---|------|
| Selected into Baidu Big Data Elite Class  | 2021 |
| <ul> <li>Selected into the Yan Keats class of the Institute of Physics, Chinese Academy of Sciences</li> </ul>  | 2021 |
| Xi'an Jiaotong University & UC Berkeley Secondary Exchange Scholarship  | 2021 |
| Outstanding Student of Xi'an Jiaotong University  | 2021 |
| <ul> <li>National College Students Mathematical Contest in Modeling, First Prize of Shaanxi Province</li> </ul> | 2020 |
| Outstanding Student of Xi'an Jiaotong University  | 2020 |

### **PAPERS**

- KCD: Knowledge Walks and Textual Cues Enhanced Political Perspective W Zhang, S Feng, Z Chen, Z Lei, J Li, M Luo (NAACL2022)
- BIC: Twitter Bot Detection with Text-Graph Interaction and Semantic Consistency Z Lei, H Wan, W Zhang, S Feng, Z Chen, Z Hua, M Luo
- TwiBot-22: Towards Graph-Based Twitter Bot Detection S Feng, Z Tan, H Wan…(Multiple authors)

#### RESEARCH INTEREST

- NLP, Social Network Analysis, MLQA
- · Blockchain, Fintech