Sishuo Chen 陈思硕

(+86) 18811382885 | chensishuo@pku.edu.cn
Peking University
WeChat: pku_css | Homepage: pkucss.github.io

Education

Peking University   Sep 2021 - Jul 2024

Computer Science, Master

- GPA: 3.85/4.0 (Top 5%)
- Advised by Prof. Xu Sun at LANCO Lab on NLP research
- Honors: Merit Student at Peking University; INDUSTRIAL BANK Scholarship at Peking University

Peking University   Aug 2017 - Jul 2021

Computer Science (Major) and Economics (Minor), Bachelor

- GPA: 3.65/4.0 (Top 20%)
- Honors: Peking University Scholarship; Award for Scientific Research at Peking University

Research and Publications

I have been dedicated to developing **robust and trustworthy NLP algorithms** (primarily on backdoors, OOD detection, and domain adaptation). I have published five research papers on these topics (**three as the first author at EMNLP and EACL**). Now I am further studying trustworthy NLP and exploring vision-language understanding.

Backdoors in NLP Models

- Expose Backdoors on the Way: A Feature-Based Efficient Defense against Textual Backdoor Attacks, **Sishuo Chen**, Wenkai Yang, Zhiyuan Zhang, Xiaohan Bi, and Xu Sun, Findings of EMNLP 2022

Out-of-Distribution Detection

- Fine-Tuning Deteriorates General Textual Out-of-Distribution Detection by Distorting Task-Agnostic Features, **Sishuo Chen**, Wenkai Yang, Xiaohan Bi, and Xu Sun, Findings of EACL 2023
- Holistic Sentence Embeddings for Better Out-of-Distribution Detection, **Sishuo Chen**, Xiaohan Bi, Rundong Gao, and Xu Sun, Findings of EMNLP 2022
- Feature Space Singularity for Out-of-Distribution Detection, Haiwen Huang, Zhihan Li, Lulu Wang, **Sishuo Chen**, Xinyu Zhou, and Bin Dong, the SafeAI workshop at AAAI 2021 (best paper candidate)

Domain Adaptation In Sequence Labeling

- Translation as Cross-Domain Knowledge: Attention Augmentation for Unsupervised Cross-Domain Segmenting and Labeling Tasks, Ruixuan Luo, Yi Zhang, **Sishuo Chen**, and Xu Sun, Findings of EMNLP 2021

Internship

ByteDance   Aug 2020 - Mar 2021

Data mining intern at the User Profile Team

- **User-Game Lookalike Model** I developed and maintained a two-tower user-game lookalike model based on ByteDance user data. The model leverages the user profile tags and the multi-level category labels of game apps to embed users and games for predicting installing and remaining behaviors, which helped promote several new game apps.
- **APP List-Based Self-Supervised Representation Learning** I proposed to learn app and user embeddings by masked language modeling pre-training on user app installment list data. The learned embedding was adopted as a user profile feature on our platform and boosted the training of several downstream models.

Megvii (Face++)   Oct 2019 - Mar 2020

Research intern at the Face Recognition Group, Megvii Research

- **FSSD for OOD detection**: Along with my mentors Haiwen Huang and Xinyu Zhou, I developed a state-of-the-art feature-based OOD image detection algorithm named FSSD. It increased the AUROC on large-scale face recognition data by up to 17% and got nominated as the best paper candidate at the SafeAI workshop at AAAI 2021.

Skills and Language

- Programming: Skillful in Python and SQL
- Language: Fluent in English (IELTS overall score 7.5); Chinese (native)

Activities

- I worked as a teaching assistant for the Introduction to Computation course directed by Prof. Qi Su in the fall 2021 semester, in charge of organizing a practicing and discussion class of 50 junior undergraduates.
- I worked as an admission volunteer for Peking University in my hometown, Fujian Province, from 2019 to 2021 and participated in the admission of over thirty outstanding freshmen into the university.