Shangbin Feng

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Research Interests

Understanding and expanding the knowledge abilities of LLMs, social NLP, networks and structures.

Education

University of Washington. Seattle, WA, USA 2022.9-present
Ph.D. in Computer Science and Engineering

Xi'an Jiaotong University, Xi'an, Shaanxi, China 2018.9-2022.7
B.E. in Computer Science and Technology

Publications (= indicates equal contribution)

2024

KGQUIZ: Evaluating the Generalization of Encoded Knowledge in Large Language Models
Yuyang Bai=, Shangbin Feng=, Vidhisha Balachandran, Zhaoxuan Tan, Shiqi Lou, Tianxing He, and Yulia Tsvetkov.
In *Proceedings of WebConf 2024*

Knowledge Card: Filling LLMs' Knowledge Gaps with Plug-in Specialized Language Models
Shangbin Feng, Weijia Shi, Yuyang Bai, Vidhisha Balachandran, Tianxing He, and Yulia Tsvetkov.
In *Proceedings of ICLR 2024,* **Oral (top 1.2%)**

2023

What Constitutes a Faithful Summary? Preserving Author Perspectives in News Summarization
Yuhan Liu=, Shangbin Feng=, Xiaochuang Han, Vidhisha Balachandran, Chan Young Park, Sachin Kumar, and Yulia Tsvetkov.
In *arxiv 2023*

Resolving Knowledge Conflicts in Large Language Models
Yike Wang=, Shangbin Feng=, Heng Wang, Weijia Shi, Vidhisha Balachandran, Tianxing He, and Yulia Tsvetkov.
In *arxiv 2023*

Knowledge Crosswords: Geometric Reasoning over Structured Knowledge with Large Language Models
Wenxuan Ding=, Shangbin Feng=, Yuhan Liu, Zhaoxuan Tan, Vidhisha Balachandran, Tianxing He, and Yulia Tsvetkov.
In *arxiv 2023*

FactKB: Generalizable Factuality Evaluation using Language Models Enhanced with Factual Knowledge
Shangbin Feng, Vidhisha Balachandran, Yuyang Bai, and Yulia Tsvetkov.
In *Proceedings of EMNLP 2023*

BotPercent: Estimating Bot Populations in Twitter Communities
Zhaoxuan Tan=, Shangbin Feng=, Melanie Sclar, Herun Wan, Minnan Luo, Yejin Choi, and Yulia Tsvetkov.
In *Proceedings of EMNLP 2023, findings*

Detecting Spoilers in Movie Reviews with External Movie Knowledge and User Networks
Heng Wang, Wenqian Zhang, Yuyang Bai, Zhaoxuan Tan, Shangbin Feng, Qinghua Zheng, and Minnan Luo.
In *Proceedings of EMNLP 2023*

Can Language Models Solve Graph Problems in Natural Language?
Heng Wang=, Shangbin Feng=, Tianxing He, Zhaoxuan Tan, Xiaochuang Han, and Yulia Tsvetkov.
In *Proceedings of NeurIPS 2023*, **Spotlight (top 3.4%)**

From Pretraining Data to Language Models to Downstream Tasks: Tracking the Trails of Political Biases Leading to Unfair NLP Models
Shangbin Feng, Chan Young Park, Yuhan Liu, and Yulia Tsvetkov.
In *Proceedings of ACL 2023*, **Best Paper Award (3/4864)**

KALM: Knowledge-Aware Integration of Local, Document, and Global Contexts for Long Document Understanding
Shangbin Feng, Zhaoxuan Tan, Wenqian Zhang, Zhenyu Lei, and Yulia Tsvetkov.
In *Proceedings of ACL 2023*

BIC: Twitter Bot Detection with Text-Graph Interaction and Semantic Consistency
Zhenyu Lei=, Herun Wan=, Wenqian Zhang, Shangbin Feng, Zilong Chen, Jundong Li, Qinghua Zheng, and Minnan Luo.
In *Proceedings of ACL 2023*

BotMoE: Twitter Bot Detection with Community-Aware Mixtures of Modal-Specific Experts
Yuhan Liu, Zhaoxuan Tan, Heng Wang, Shangbin Feng, Qinghua Zheng, and Minnan Luo.
In *Proceedings of SIGIR 2023*

AHEAD: A Triple Attention Based Heterogeneous Graph Anomaly Detection Approach
Shujie Yang, Binchi Zhang, Shangbin Feng, Zhaoxuan Tan, Qinghua Zheng, Jun Zhou, and Minnan Luo.
In *Proceedings of CIAC 2023*

KRACL: Contrastive Learning with Graph Context Modeling for Sparse Knowledge Graph Completion
Zhaoxuan Tan, Zilong Chen, Shangbin Feng, Qingyue Zhang, Qinghua Zheng, Jundong Li, and Minnan Luo.
In *Proceedings of The Web Conference 2023*

2022

PAR: Political Actor Representation Learning with Social Context and Expert Knowledge

Shangbin Feng, Zhaoxuan Tan, Zilong Chen, Peisheng Yu, Ningnan Wang, Qinghua Zheng, Xiaojun Chang, and Minnan Luo.
In *Proceedings of EMNLP 2022*

TwiBot-22: Towards Graph-Based Twitter Bot Detection.
Shangbin Feng=, Zhaoxuan Tan=, Herun Wan=, Ningnan Wang=, Zilong Chen=, Binchi Zhang=, Qinghua Zheng, Wenqian Zhang, Zhenyu Lei, Shujie Yang, Xinshun Feng, Qingyue Zhang, Hongrui Wang, Yuhan Liu, Yuyang Bai, Heng Wang, Zijian Cai, Yanbo Wang, Lijing Zheng, Zihan Ma, Jundong Li, and Minnan Luo.
In *Proceedings of NeurIPS 2022, Datasets and Benchmarks Track*

GraTo: Graph Neural Network Framework Tackling Over-Smoothing with Neural Architecture Search.
Xinshun Feng, Herun Wan, Shangbin Feng, Hongrui Wang, Qinghua Zheng, Jun Zhou, and Minnan Luo.
In *Proceedings of CIKM 2022*

Datavoidant: An AI System for Addressing Political Data Voids on Social Media.
Claudia Flores-Saviaga, Shangbin Feng, and Saiph Savage.
In *Proceedings of CSCW 2022*

KCD: Knowledge Walks and Textual Cues Enhanced Political Perspective Detection in News Media.
Wenqian Zhang=, Shangbin Feng=, Zilong Chen=, Zhenyu Lei, Jundong Li, and Minnan Luo.
In *Proceedings of NAACL 2022*, oral presentation

Heterogeneity-aware Twitter Bot Detection with Relational Graph Transformers.
Shangbin Feng, Zhaoxuan Tan, Rui Li, and Minnan Luo.
In *Proceedings of AAAI 2022*

2021

Knowledge Graph Augmented Political Perspective Detection in News Media.
Shangbin Feng=, Zilong Chen=, Wenqian Zhang=, Qingyao Li, Qinghua Zheng, Xiaojun Chang, and Minnan Luo.
In *arxiv 2021*

PPSGCN: A Privacy-Preserving Subgraph Sampling Based Distributed GCN Training Method.
Binchi Zhang, Minnan Luo, Shangbin Feng, Ziqi Liu, Jun Zhou, and Qinghua Zheng.
In *arxiv 2021*

BotRGCN: Twitter Bot Detection with Relational Graph Convolutional Networks.
Shangbin Feng, Herun Wan, Ningnan Wang, and Minnan Luo.
In *Proceedings of ASONAM 2021, Short Paper*

TwiBot-20: A Comprehensive Twitter Bot Detection Benchmark.
Shangbin Feng, Herun Wan, Ningnan Wang, Jundong Li, and Minnan Luo.
In *Proceedings of CIKM 2021, Resource Track*

SATAR: A Self-supervised Approach to Twitter Account Representation Learning and its

Application in Bot Detection.
Shangbin Feng, Herun Wan, Ningnan Wang, Jundong Li, and Minnan Luo.
In *Proceedings of CIKM 2021, Applied Track*

Honors and Awards

Best Paper Award, *ACL 2023*	2023
Top Reviewer, *Leaning on Graphs Conference 2022*	2022
Top Reviewer, *NeurIPS 2022*	2022
Excellent Undergraduate Dissertation, Xi'an Jiaotong University	2022
Excellent Graduate Student, Xi'an Jiaotong University	2022
People's Daily Online Scholarship, People's Daily Online	2021
SenseTime Scholarship, SenseTime	2021
Meritorious Winner Prize, Mathematical Contest in Modeling	2019
Merit Student, Xi'an Jiaotong University	2019, 2020, 2021

Service

Reviewer for *WebConf*	2024
Reviewer for *EMNLP*	2023
Reviewer for *ACL*	2023
Reviewer for *ICCV*	2023
Reviewer for *ICML*	2022, 2023, 2024
Reviewer for *CVPR*	2023, 2024
Reviewer for *ICLR*	2023, 2024
Reviewer for *ICWSM*	2023, 2024
Reviewer for *ACL Rolling Review*	2022, 2023, 2024
Reviewer for *Learning on Graphs Conference*	2022, 2023
Reviewer for *NeurIPS*, *Datasets and Benchmarks Track*	2022, 2023
Reviewer for *ECCV*	2022, 2024
Reviewer for *NeurIPS*	2022, 2023
Reviewer for *CSCW*	2022
Reviewer for *Social Network Analysis and Mining*	2021, 2022
Founder and Director of the LUD Lab, Xi'an Jiaotong University	2021, 2022

Talks

From Pretraining Data to Language Models to Downstream Tasks: Tracking the Trails of Political Biases Leading to Unfair NLP Models
ACL 2023 Best Paper Award Plenary Session. July, 2023.
2023 NYU Disinformation Symposium. June, 2023.

KCD: Knowledge Walks and Textual Cues Enhanced Political Perspective Detection in News Media
Sensetime AI. August, 2022.

Selected Media Coverage

ChatGPT leans liberal, research shows.
Washington Post. Gerrit De Vynck. Aug 16, 2023.

AI language models are rife with different political biases.
MIT Technology Review. Melissa Heikkilä. Aug 7, 2023.

Funding

Accelerate Foundation Models Academic Research Initiative
Source of Support: Microsoft Research
Total Award Amount: $20,000