

Weiyan Shi

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| CONTACT | ws2634@columbia.edu wyshi.github.io Google Scholar | |
| RESEARCH INTERESTS | · Dialogue systems, especially social influence dialogue, e.g., persuasion · Safety in NLP, e.g., privacy-preserving NLP models | |
| EDUCATION | Columbia University Ph.D. in Computer Science Advisor: Zhou Yu | 2020 - 2023 (anticipated) |
| | University of California, Davis Ph.D. in Computer Science (transferred with my advisor) Advisor: Zhou Yu | 2018 - 2020 |
| | University of California, Berkeley M.A. in Statistics | 2015 - 2016 |
| | Renmin University of China B.S. in Mathematics and Applied Mathematics | 2011 - 2015 |
| AWARDS & HONORS | Best Paper Nomination, ACL Dean's Distinguished Ph.D. Fellowship, UC Davis Department Citation (top 1), UC Berkeley Speaker at Department Commencement (top 1), UC Berkeley National Scholarship, RUC Presidential Fellowship for Studying Abroad, RUC | 2019 2018-2023 2016 2016 2014 2013 |
| GRANTS | Cisco Research Grant <i>Co-writer and primary student representative for Zhou Yu's group</i> "Selective Differential Privacy in Language Modeling" – \$40K PI: Zhou Yu, Ruoxi Jia | 2022-2023 |
| | NSF SaTC Grant <i>Co-writer and primary student representative for Zhou Yu's group</i> "Accurate and Scalable Privacy-Preserving Approaches for Natural Language Generation" – under revision PI: Zhou Yu, Ruoxi Jia | |
| EMPLOYMENT | Research Intern , Facebook AI Research | 2022.05 - 2022.09 |
| HISTORY | <i>Hosts:</i> Jason Weston and Jing Xu <i>Project:</i> Integrating user feedback into chatbots | |
| | Research Intern , Facebook AI Research <i>Host:</i> Mike Lewis | 2021.05 - 2021.12 |

Project: Zero-shot dialogue nonsense detection

Research Intern, Facebook AI Research

2020.06 - 2020.12

Host: Mike Lewis

Project: Strategic negotiation dialogue generation

Full-time Data Scientist, [24]7.ai

2016 - 2018

Customer service chatbot development

PUBLICATIONS *The listed conferences are top-tier in NLP, HCI and AI with acceptance rates between 20%-25%.*

Just Fine-tune Twice: Selective Differential Privacy for Large Language Models

Weiyang Shi, Si Chen, Chiyuan Zhang, Ruoxi Jia, Zhou Yu

Empirical Methods in Natural Language Processing (EMNLP) 2022

Seamlessly Integrating Factual Information and Social Content with Persuasive Dialogue

Maximillian Chen, Weiyang Shi, Feifan Yan, Ryan Hou, Jingwen Zhang, Saurav Sahay, Zhou Yu

Asia-Pacific Chapter of the Association for Computational Linguistics (ACL-IJCNLP), 2022

Selective Differential Privacy for Language Modeling

Weiyang Shi, Aiqi Cui, Evan Li, Ruoxi Jia, Zhou Yu

North American Chapter of the Association for Computational Linguistics (NAACL), 2022

Refine and Imitate: Reducing Repetition and Inconsistency in Persuasion Dialogues via Reinforcement Learning and Human Demonstration

Weiyang Shi, Yu Li, Saurav Sahay, Zhou Yu

Empirical Methods in Natural Language Processing (EMNLP) 2021 Findings

LEGOEval: An Open-Source Toolkit for Dialogue System Evaluation via Crowdsourcing

Yu Li, Josh Arnold, Feifan Yan, Weiyang Shi, Zhou Yu

Annual Meeting of the Association for Computational Linguistics (ACL) 2021 Demo

PRAL: A tailored pre-training model for task-oriented dialogue generation

Jing Gu, Qingyang Wu, Chongruo Wu, Weiyang Shi, Zhou Yu

Annual Meeting of the Association for Computational Linguistics (ACL) 2021

INSPIRED: Toward Sociable Recommendation Dialogue Systems

Shirley Anugrah Hayati, Dongyeop Kang, Qingxiaoyang Zhu, Weiyang Shi, Zhou Yu

Empirical Methods in Natural Language Processing (EMNLP) 2020

Structured Attention for Unsupervised Dialogue Structure Induction

Liang Qiu, Yizhou Zhao, Weiyang Shi, Yuan Liang, Feng Shi, Tao Yuan, Zhou Yu, Song-Chun Zhu

Empirical Methods in Natural Language Processing (EMNLP) 2020

Understanding User Resistance Strategies in Persuasive Conversations

Youzhi Tian, Weiyang Shi, Chen Li, Zhou Yu

Empirical Methods in Natural Language Processing (EMNLP) 2020 Findings

Effects of Persuasive Dialogues: Testing Bot Identities and Inquiry Strategies

Weiyan Shi, Xuewei Wang, Yoo Jung Oh, Jingwen Zhang, Saurav Sahay, Zhou Yu

Conference on Human Factors in Computing Systems (CHI) 2020

End-to-End Trainable Non-Collaborative Dialogue System

Yu Li, Kun Qian, Weiyan Shi, Zhou Yu

AAAI Conference on Artificial Intelligence (AAAI) 2020

How to Build User Simulators to Train RL-based Dialogue Systems

Weiyan Shi*, Kun Qian* (equal contribution), Xuewei Wang, Zhou Yu

Empirical Methods in Natural Language Processing (EMNLP) 2019

Persuasion for Good: Towards a Personalized Persuasive Dialogue System for Social Good (Best Paper Nomination)

Xuewei Wang*, Weiyan Shi* (equal contribution), Richard Kim, Yoojung Oh, Sijia Yang, Jingwen Zhang, Zhou Yu

Annual Meeting of the Association for Computational Linguistics (ACL) 2019

Unsupervised Dialogue Structure Learning

Weiyan Shi, Tiancheng Zhao, Zhou Yu

North American Chapter of the Association for Computational Linguistics (NAACL) 2019

Sentiment Adaptive End-to-End Dialogue Systems

Weiyan Shi, Zhou Yu

Annual Meeting of the Association for Computational Linguistics (ACL) 2018

UNDER
SUBMISSION

AutoReply: Detecting Nonsense in Dialogue Introspectively with Discriminative Replies

Weiyan Shi, Emily Dinan, Adi Renduchintala, Daniel Fried, Athul Paul Jacob, Zhou Yu, Mike Lewis

under submission, 2022

Social Influence Dialogue Systems: A Scoping Survey of the Efforts Towards Influence Capabilities of Dialogue Systems

Kushal Chawla*, Weiyan Shi* (equal contribution), Jingwen Zhang, Gale Lucas, Zhou Yu, Jonathan Gratch

under submission, 2022

When Life Gives You Lemons, Make Cherryade: Converting Feedback from Bad Responses into Good Labels

Weiyan Shi, Kurt Shuster, Emily Dinan, Jing Xu, Jason Weston

under submission, 2022

INVITED
TALKS

Reducing Repetition and Contradiction in Dialogue Systems, Columbia NLP Seminar, Spring 2021

Selective Differential Privacy in Language Modeling, Columbia NLP Seminar, Fall 2021

Sentiment-adaptive Dialogue Systems, Cresta, Spring 2019

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| MENTORING | Max Chen Ph.D. student Project: Persuasive dialogue systems | 2021-Present Columbia University |
| | Yu Li Ph.D. student Project: Anti-scam dialogue systems and dialogue evaluation | 2018-Present Columbia University |
| | Payton Guo Undergraduate student Project: Dialogue data denoising | 2022-Present New York University |
| | Ryan Shea Master student Project: Membership inference attack on NLP models | 2022-Present Columbia University |
| | Evan Li Undergraduate student Project: Differential privacy and attack models in NLP | 2021 Columbia University |
| | Chelsea Cui Master student (Master at Columbia → Now at Amazon) Project: Differential privacy and dialogue simulation | 2021 Columbia University |
| | Shirley Anugrah Hayati Master student (Master at CMU → Now Ph.D. at University of Minnesota) Project: Sociable recommendation dialogues | 2019-2020 CMU |
| | Jing Gu Master student (Master at UC Davis → Now Ph.D. at UC, Santa Cruz) Project: Pre-training models for task-oriented dialogue systems | 2019-2020 UC Davis |
| | Xuwei Wang Undergraduate student (Master at CMU → Now at Meta) Project: Persuasive dialogues and dialogue user simulator | 2019-2020 Zhejiang University |
| | TEACHING | |
| | Co-instructor: COMS 6998, Conversational AI , Columbia · <i>Topics</i> : various topics on dialogue systems (task-oriented and open-domain dialogue systems, knowledge-enriched dialogue systems, dialogue systems under low-resource settings, dialogue evaluations, and multimodal dialogues, etc). · Co-designed (with Prof. Zhou Yu) the curriculum; co-led the class discussion; co-supervised course projects; co-hosted guest speakers; held office hours and graded. | Fall 2022 |
| | Guest Lecturer: COMS 4705, Natural Language Processing , Columbia · <i>Topic</i> : dialogue systems (spoken and text-based) · Prepared and delivered a lecture to a 100-student upper-division undergraduate introduction course to NLP | Spring 2022 |

Teaching Assistant: COMS 6998, Conversational AI, Columbia

Spring 2021

· *Topics:* various topics on dialogue systems

· Co-designed (with Prof. Zhou Yu) the curriculum; co-supervised course projects; held office hours and graded.

SERVICE

Area Chair: 17th Women in Machine Learning Workshop (WiML 2022)

Publicity Chair: 4th Workshop for Conversational AI, ACL 2022

Program Committee/Conference Reviewer:

ACL 2019, ACL 2020, *SEM 2020, ICLR 2021, AAAI 2021, EACL 2021, NAACL 2021, ACL 2021, *SEM 2021, NeurIPS 2021, EMNLP 2021, NLPCC 2021, ICLR 2022, AAAI 2022, ICML 2022, ACL 2022, CHI 2022, SIGDIAL 2022, HCI+NLP workshop at NAACL 2022, ACL Rolling Review 2021-2022

Journal Reviewer:

ACM Transactions on Human-Robot Interaction, Neurocomputing, ACM Transactions on Information Systems

CS Graduate Admission Committee: Columbia University, 2022