

Weiyan Shi

CONTACT	ws2634@columbia.edu wyshi.github.io Google Scholar	
RESEARCH INTERESTS	Natural Language Processing (dialogue systems, privacy-preserving NLP models, etc), Machine Learning, Artificial Intelligence	
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	Rising Stars in Machine Learning, UMD 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	2022 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 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	2022-2023
EMPLOYMENT HISTORY	Research Intern , Facebook AI Research <i>Hosts: Jason Weston and Jing Xu</i> <i>Project: Integrating user feedback into chatbots</i>	2022.05 - 2022.09
	Research Intern , Facebook AI Research	2021.05 - 2021.12

Host: Mike Lewis

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

Weiyan Shi, Ryan Shea, 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, Weiyan Shi, Feifan Yan, Ryan Hou, Jingwen Zhang, Saurav Sahay, Zhou Yu

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

Towards Socially Intelligent Agents with Mental State Transition and Human Utility

Liang Qiu, Yizhou Zhao, Yuan Liang, Pan Lu, Weiyan Shi, Zhou Yu, Song-Chun Zhu

Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGDIAL), 2022

Selective Differential Privacy for Language Modeling

Weiyan 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

Weiyan Shi, Yu Li, Saurav Sahay, Zhou Yu

Findings of Empirical Methods in Natural Language Processing (EMNLP), 2021

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

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

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

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

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

Empirical Methods in Natural Language Processing (EMNLP), 2020

Structured Attention for Unsupervised Dialogue Structure Induction

Liang Qiu, Yizhou Zhao, Weiyan Shi, Yuan Liang, Feng Shi, Tao Yuan, Zhou Yu, Song-Chun Zhu
Empirical Methods in Natural Language Processing (EMNLP), 2020

Structured Attention for Unsupervised Dialogue Structure Induction

Liang Qiu, Yizhou Zhao, Weiyan 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, Weiyan Shi, Chen Li, Zhou Yu
Findings of Empirical Methods in Natural Language Processing (EMNLP), 2020

Effects of Persuasive Dialogues: Testing Bot Identities and Inquiry Strategies

Weiyan Shi, Xuwei 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), Xuwei 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)

Xuwei 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, Emily Dinan, Kurt Shuster, Jason Weston, Jing Xu
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

MENTORING **Max Chen** 2021-Present
Ph.D. student Columbia University
Project: [Persuasive dialogue systems](#)

Yu Li 2018-Present
Ph.D. student Columbia University
Project: [Anti-scam dialogue systems](#) and [dialogue evaluation](#)

Payton Guo 2022-Present
Undergraduate student New York University
Project: Dialogue data denoising

Ryan Shea 2022-Present
Master student Columbia University
Project: [Membership inference attack on NLP models](#)

Evan Li 2021
Undergraduate student Columbia University
Project: [Differential privacy and attack models in NLP](#)

Chelsea Cui 2021
Master student (Master at Columbia → Now at Amazon) Columbia University
Project: [Differential privacy and dialogue simulation](#)

Shirley Anugrah Hayati 2019-2020
Master student (Master at CMU → Now Ph.D. at University of Minnesota) CMU
Project: [Sociable recommendation dialogues](#)

Jing Gu 2019-2020
Master student (Master at UC Davis → Now Ph.D. at UC, Santa Cruz) UC Davis
Project: [Pre-training models for task-oriented dialogue systems](#)

Xuewei Wang 2019-2020
Undergraduate student (Master at CMU → Now at Meta) Zhejiang University

Project: [Persuasive dialogues](#) and [dialogue user simulator](#)

TEACHING	Co-instructor: COMS 6998, Conversational AI, Columbia Fall 2022 <ul style="list-style-type: none">· <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 the assignments.
	Guest Lecturer: COMS 4705, Natural Language Processing, Columbia Spring 2022 <ul style="list-style-type: none">· <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
	Teaching Assistant: COMS 6998, Conversational AI, Columbia Spring 2021 <ul style="list-style-type: none">· <i>Topics</i>: various topics on dialogue systems· Co-designed (with Prof. Zhou Yu) the curriculum; co-supervised course projects; held office hours and graded the assignments.
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