Weiyan Shi

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 — 2020 - 2023 (anticipated)
Ph.D. in Computer Science
Advisor: Zhou Yu

University of California, Davis — 2018 - 2020
Ph.D. in Computer Science (transferred with my advisor)

University of California, Berkeley — 2015 - 2016
M.A. in Statistics

Renmin University of China — 2011 - 2015
B.S. in Mathematics and Applied Mathematics

AWARDS & HONORS

Best Paper Nomination, ACL	2019
Dean's Distinguished Ph.D. Fellowship	2018-2023
Department Citation (top 1), UC Berkeley	2016
Speaker at Department Commencement (top 1), UC Berkeley	2016
National Scholarship, RUC	2014
Presidential Fellowship for Studying Abroad, RUC	2013

GRANTS

Cisco Research Grant — 2022-2023
Co-writer and primary student representative for Zhou Yu's group
"Selective Differential Privacy in Language Modeling'" – $40K
PI: Zhou Yu, Ruoxi Jia

NSF SaTC Grant
Co-writer and primary student representative for Zhou Yu's group
"Accurate and Scalable Privacy-Preserving Approaches for Natural Language Generation" – under revision
PI: Zhou Yu, Ruoxi Jia

EMPLOYMENT HISTORY

Research Intern, Facebook AI Research — 2022.05 - 2022.09
Hosts: Jason Weston and Jing Xu
Project: Integrating user feedback into chatbots

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%.*

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 (AACL-IJCNLP), 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
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, Weiyan 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, 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

Understanding User Resistance Strategies in Persuasive Conversations
Youzhi Tian, Weiyan 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

Just Fine-tune Twice: Selective Differential Privacy for Large Language Models
Weiyan Shi, Si Chen, Chiyuan Zhang, Ruoxi Jia, Zhou Yu
arXiv, under submission, 2022,

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

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
· *Topics*: 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.

Guest Lecturer: **COMS 4705, Natural Language Processing**, Columbia   Spring 2022
· *Topic*: 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
· *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 Commitee/Conference Reviewer:
ACL 2019, ACL 2020, *SEM 2020, ICLR 2021, AAAI 2021, EACL 2021, NAACL 2021, ACL 2021, *SEM 2021, NeurlPS 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