Joyce Zhou (they/them)

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Education

2021 – · · · · ▷ **Ph.D., Cornell University** - Computer Science, minor Information Science
Advisor: Prof. Thorsten Joachims

2019 – 2021 ▷ **M.S., University of Washington Seattle** - Computer Science
Thesis: *An Interactive UI to Support Sensemaking over Collections of Parallel Texts* [10].
Advisor: Prof. Dan Weld

2016 – 2019 ▷ **B.S., University of Washington Seattle** - Computer Science, minor Mathematics
Thesis: *Finding and evaluating RNA motifs with CMfinder* [11].
Advisor: Prof. Larry Ruzzo

Research

2022 – · · · · ▷ **GMSE Researcher** with NIST, mentored by Rachael Sexton.

2021 – · · · · ▷ **Graduate Researcher** with Prof. Thorsten Joachims.
Exploring the affordances of using large language models within recommendation systems [4, 5, 6], the feasibility of explanations as an auditing technique [2, 8]. Contributions to analyses of holistic review in undergraduate admissions [1, 7].

2020 – 2021 ▷ **Graduate Researcher** with Prof. Elena Glassman (Harvard) and Prof. Dan Weld (UW).
Developed an interactive, human-AI collaborative aggregation and visualization method for sensemaking content in research paper abstracts.
Wrote up methods and design process in Master's thesis [10].

2019 – 2021 ▷ **Graduate Researcher**, Lab for Human-AI Interaction (University of Washington)
Mentored by Gagan Bansal and advised by Prof. Dan Weld.
Developed, implemented, and evaluated a novel adaptive explanation style for human-AI teams on a sentiment analysis task. Analyzed participants' feedback on how AI explanations impacted their decision-making.
Resulted in 2nd/3rd-author CHI publication [3]. Also featured in a WHI 2020 spotlight [9].

2018 – 2019 ▷ **Undergraduate Researcher** with Prof. Larry Ruzzo (University of Washington)
Developed a set of tools (*blockmerge* and *crosscompare*) and a pipeline centered on CMfinder to search for potentially structured fRNA sequences across alignment block boundaries and cluster found covariance models.
Wrote up methods and findings in Bachelor's thesis [11].

▷ **Undergraduate Researcher** with Prof. Emily Pahnke (Foster School of Business, UW)
Collected (with partial automation), organized, and cleaned data from a diverse range of websites (social media, blogs, business homepages) to form an original data set.

Teaching

2021 – · · · · ▷ **EYH workshop leader/volunteer**, Expanding Your Horizons (EYH) @ Cornell University
EYH is a yearly conference hosted at Cornell designed to help grade school students explore STEM topics.
The conference is hosted every spring. Planning begins in the previous fall semester.
I often lead revisions of workshop mini syllabus, schedule, and activities in a team with 1-5 fellow volunteers.
Taught groups of 5-25 students (6th to 10th grade), optionally including their buddy volunteers or parents.

- ▷ 2025: Program Your Own Animation! (intro to programming in Scratch)
- ▷ 2024: Program Your Own Animation! (intro to programming in Scratch)
- ▷ 2023: Program Your Own Animation! (intro to programming in Scratch)
- ▷ 2022: Googling with Paper Airplanes (intro to networking concepts)

2018 – 2021 ▷ **Teaching Assistant**, University of Washington Seattle
Taught sections of 20+ students and assisted individual students in office hours.
Wrote and reviewed course handouts, homework, and exams.
Graded student programming assignments and exams.

Teaching (continued)

- 2021 SU: CSE333 Systems Programming (Cosmo Wang)
- 2021 SP: CSE374 Programming Tools & Concepts (Dr. Megan Hazen)
- 2021 WI: CSE417 Algorithms & Computational Complexity (Prof. Robbie Weber)
- 2019 AU: CSE374 Programming Tools & Concepts (Tyler Pirtle)
- 2019 SP: CSE369 Introduction to Digital Design (Prof. Justin Hsia)
- 2019 WI: CSE369 Introduction to Digital Design (Prof. Justin Hsia)
- 2018 AU: CSE331 Software Design & Implementation (Prof. Mike Ernst)
- 2018 SU: CSE331 Software Design & Implementation (Leah Perlmutter)

2018 ▷ **Volunteer study group leader**, University of Washington
Reviewed concepts taught in class with students.

- 2018 SP: CSE351 The Hardware/Software Interface

2017 ▷ **Private tutor**
Taught concepts in introductory Java programming to CS students outside of UW.

Publications

** denotes equal contribution; + denotes significant contribution*

Conference and Journal Papers

[1] J. Lee, E. Harvey, **J. Zhou**, N. Garg, T. Joachims, and R. Kizilcec, "Ending Affirmative Action Harms Diversity without Improving Academic Merit", in *ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization*, ser. EAAMO '24, San Luis Potosí, Mexico: Association for Computing Machinery, Oct. 2024, ISBN: 9798400712227. DOI: 10.1145/3689904.3694706. [Online]. Available: https://doi.org/10.1145/3689904.3694706.

[2] **J. Zhou** and T. Joachims, "How to Explain and Justify Almost Any Decision: Potential Pitfalls for Accountability in AI Decision-Making", in *Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency*, ser. FAccT '23, Chicago, IL, USA: Association for Computing Machinery, Jun. 2023, pp. 12–21, ISBN: 9798400701924. DOI: 10.1145/3593013.3593972. [Online]. Available: https://doi.org/10.1145/3593013.3593972.

[3] G. Bansal*, T. Wu*, **J. Zhou**+, R. Fok+, B. Nushi, E. Kamar, M. T. Ribeiro, and D. S. Weld, "Does the whole exceed its parts? The effect of AI explanations on complementary team performance", in *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*, ser. CHI '21, Yokohama, Japan: Association for Computing Machinery, May 2021, ISBN: 9781450380966. DOI: 10.1145/3411764.3445717. [Online]. Available: https://doi.org/10.1145/3411764.3445717.

Workshops and Posters

[4] Z. Gao, **J. Zhou**, Y. Dai, and T. Joachims, *End-to-end training for recommendation with language-based user profiles*, RecSys 2024: The 1st Workshop on Risks, Opportunities, and Evaluation of Generative Models in Recommender Systems (ROEGEN@RECSYS'24), Oct. 2024. DOI: 10.48550/arXiv.2410.18870. [Online]. Available: https://arxiv.org/abs/2410.18870v1.

[5] **J. Zhou***, Y. Dai*, and T. Joachims, *Language-based user profiles for recommendation*, WSDM 2024: Workshop on Large Language Models for Individuals, Groups, and Society (LLM-IGS@WSDM'24), Mar. 2024. DOI: 10.48550/arXiv.2402.15623. [Online]. Available: http://arxiv.org/abs/2402.15623.

[6] **J. Zhou** and T. Joachims, *GPT as a Baseline for Recommendation Explanation Texts*, RecSys 2023: 10th Joint Workshop on Interfaces and Human Decision Making for Recommender Systems (IntRS@RECSYS'23), Sep. 2023. DOI: 10.48550/arXiv.2309.08817. [Online]. Available: http://arxiv.org/abs/2309.08817.

[7] J. Lee, B. Thymes, **J. Zhou**, T. Joachims, and R. Kizilcec, *Augmenting Holistic Review in University Admission using Natural Language Processing for Essays and Recommendation Letters*, AIED 2023: Workshop on Equity, Diversity, and Inclusion in Educational Technology Research and Development (EDI in EdTech R&D @ AIED'23), Jul. 2023. arXiv: 2306.17575 [cs.CL]. [Online]. Available: http://arxiv.org/abs/2306.17575.

[8] **J. Zhou** and T. Joachims, *How to explain and justify almost any decision: Potential pitfalls for accountability in AI decision-making*, IJCAI 2022: 2nd Workshop on Adverse Impacts and Collateral Effects of Artificial Intelligence Technologies (AIofAI@IJCAI'22), Jul. 2022. [Online]. Available: https://www.cs.cornell.edu/people/tj/publications/zhou_joachims_22a.pdf.

[9] G. Bansal*, T. Wu*, **J. Zhou**+, R. Fok+, B. Nushi, E. Kamar, M. T. Ribeiro, and D. S. Weld, *Does the whole exceed its parts? The effect of AI explanations on complementary team performance*, ICML 2020: Workshop on Human Interpretability in Machine Learning (WHI@ICML'20), Jun. 2020. arXiv: 2006.14779 [cs.AI]. [Online]. Available: https://arxiv.org/abs/2006.14779v2.

Preprints and Theses

[10] **J. Zhou**, E. Glassman, and D. S. Weld, "An interactive UI to support sensemaking over collections of parallel texts", Master's thesis, 2021, Aug. 2021, [Online]. Available: https://arxiv.org/abs/2303.06264.

[11] **J. Zhou** and L. Ruzzo, "Finding and evaluating RNA motifs with CMfinder", Bachelor's thesis, Aug. 2019, [Online]. Available: https://cephcyn.github.io/pub/2019-bachelors_thesis.pdf.

Service

Conference Reviewing

2025 ▷ CHI 2025 (Late-Breaking Work)

2024 ▷ WWW 2025

▷ WWW 2024 (Responsible AI track)

Workshop Program Committee

▷ **Workshop on Trust and Reliance in Evolving Human-AI Workflows (TREW)**, CHI 2024

2023 ▷ **Workshop on Trust and Reliance in AI-Human Teams (TRAIT)**, CHI 2023

2022 ▷ **Workshop on Human-Machine Collaboration and Teaming (HMCaT)**, ICML 2022

▷ **Workshop on Trust and Reliance in AI-Human Teams (TRAIT)**, CHI 2022

Misc

2024 – 2025 ▷ WWW - Artifact Badging

Mentoring

Undergrads

2023 – 2024 ▷ Yijia Dai (→ Cornell PhD program, 2024)

Honors & Awards

2021 – · · · · ▷ **GFSD fellowship** Sponsored by NIST. Funded for at least 4 years.

2021 ▷ **Cornell Graduate School fellowship**, 1 year of Cornell funding awarded upon admission.

2018 ▷ **Phi Beta Kappa**, honor society, top 10%, focus on liberal arts and sciences.