

Xinyi Wang

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ABOUT ME

I am a forth-year Ph.D. candidate in the computer science department at the University of California, Santa Barbara. I am interested in understanding deep learning models, especially pre-trained large language models, using principled causality-based/probabilistic approaches.

EDUCATION

- **University of California, Santa Barbara (UCSB)** Santa Barbara, CA, US
Ph.D. in Computer Science (expected) 09.2020 - present
 - GPA: 4.0/4.0
 - Advisor: William Yang Wang
 - Honors and Awards: Academic Excellence Fellowship (2020)
- **The Hong Kong University of Science and Technology (HKUST)** Hong Kong, China
B.Sc in Applied Mathematics and Computer Science 09.2016 - 07.2020
 - GPA: 3.7/4.3
 - Honors and Awards: Chern Class Talent Scholarship (2017 - 2020), University's Scholarship Scheme for Continuing Undergraduate Students (2017 - 2020), HKSAR Government Scholarship Fund - Reaching Out Award (2019 - 2020), Chern Class Achievement Scholarship (2020), The 15th Epsilon Fund Award (2020), Joseph Needham Merit Scholarship (2020)
- **University of California, Los Angeles (UCLA)** Los Angeles, CA, US
Term exchange in Mathematics (Non-degree) 09.2019 - 12.2019
 - GPA: 3.9/4.0 (Dean's Honors List)

PUBLICATIONS

- **Xinyi Wang**, Lucas Caccia, Oleksiy Ostapenko, Xingdi Yuan, Alessandro Sordoni. *Guiding Language Model Reasoning with Planning Tokens*. Arxiv preprint 2023. [\[paper\]](#)
- Liangming Pan, Michael Saxon, Wenda Xu, Deepak Nathani, **Xinyi Wang**, William Yang Wang. *Automatically Correcting Large Language Models: Surveying the landscape of diverse self-correction strategies*. Arxiv preprint 2023. [\[paper\]](#)
- Liangming Pan, Alon Albalak, **Xinyi Wang**, William Yang Wang. *Logic-LM: Empowering Large Language Models with Symbolic Solvers for Faithful Logical Reasoning*. Findings of EMNLP 2023. [\[paper\]](#)
- Wenhui Chen, Ming Yin, Max Ku, Pan Lu, Yixin Wan, Xueguang Ma, Jianyu Xu, **Xinyi Wang**, Tony Xia. *TheoremQA: A Theorem-driven Question Answering dataset*. EMNLP 2023. [\[paper\]](#)
- Wanrong Zhu, **Xinyi Wang**, Yujie Lu, Tsu-Jui Fu, Xin Eric Wang, Miguel Eckstein, William Yang Wang. *Collaborative Generative AI: Integrating GPT-k for Efficient Editing in Text-to-Image Generation*. EMNLP 2023. [\[paper\]](#)
- **Xinyi Wang**, Wanrong Zhu, William Wang. *Large Language Models Are Implicitly Topic Models: Explaining and Finding Good Demonstrations for In-Context Learning*. NeurIPS 2023, poster. [\[paper\]](#)
- Wenhui Chen, Xueguang Ma, **Xinyi Wang**, William W. Cohen. *Program of Thoughts Prompting: Disentangling Computation from Reasoning for Numerical Reasoning Tasks*. Arxiv preprint 2022. [\[paper\]](#)
- **Xinyi Wang**, Michael Saxon, Jiachen Li, Hongyang Zhang, Kun Zhang, William Yang Wang. *Causal Balancing for Domain Generalization*. ICLR 2023, poster. [\[paper\]](#)

- Michael Saxon, **Xinyi Wang**, Wenda Xu, William Yang Wang. *Relation Leakage in Elicited Natural Language Inference Datasets*. EACL 2023. [\[paper\]](#)
- Wenhui Chen, **Xinyi Wang**, William Yang Wang. *A Dataset for Answering Time-Sensitive Questions*. NeurIPS 2021 Datasets and Benchmarks Track, poster. [\[paper\]](#)
- **Xinyi Wang**, Wenhui Chen, Michael Saxon, William Yang Wang. *Counterfactual Maximum Likelihood Estimation for Training Deep Networks*. NeurIPS 2021, poster. [\[paper\]](#)
- Michael Saxon, Sharon Levy, **Xinyi Wang**, Alon Albalak, William Yang Wang. *Modeling Discursive Transparency in NLP Application Descriptions*. EMNLP 2021, oral. [\[paper\]](#)
- **Xinyi Wang**^{*}, Haiqin Yang^{*}, Liang Zhao, Yang Mo and Jianping Shen. *RefBERT: Compressing BERT by Referencing to Pre-computed Representations*. IJCNN 2021, oral. ¹ [\[paper\]](#)
- **Xinyi Wang**, Yi Yang. *Neural Topic Model with Attention for Supervised Learning*. AISTATS 2020, poster. [\[paper\]](#)

RESEARCH EXPERIENCE

- **Research Intern at Microsoft Research** Santa Barbara, CA, US
Mentor: Alessandro Sordani 06.2023 - 09.2023
 ◦ Topic: parameter efficient fine-tuning for improving the reasoning ability of large language models.
- **Graduate Student Researcher at UCSB** Santa Barbara, CA, US
Mentor: William Yang Wang 09.2020 - present
 ◦ Topic: large language models interpretation.
- **Assistant Algorithm Engineer at PingAn AI** ShenZhen, China
Mentor: Haiqin Yang 06.2020 - 09.2020
 ◦ Topic: retrieval augmented BERT distillation.
- **Research Assistant at HKUST** Hong Kong, China
Mentor: Yi Yang 09.2018 - 09.2019
 ◦ Topic: word embedding with financial knowledge, supervised neural topic model with attention.

SERVICES

- 2021 Program Committee: NeurIPS Datasets and Benchmarks Track
- 2022 Program Committee: AAAI
- 2023 Program Committee: NeurIPS, AAAI, ICLR

¹* denotes equal contribution.