Wenhan Xiong

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Bio

Wenhan Xiong is a senior research scientist at Meta AI. He got his PhD in Computer Science from UC Santa Barbara in 2021 and his bachelor degree from the University of Science and Technology of China in 2016. He has extensively worked on various NLP problems including Question Answering, Information Retrieval, Knowledge Graphs, Summarization, Information Extraction, and Vision-and-Language tasks. He has published 20+ papers in top-tier AI conferences like ICLR, ACL, EMNLP, NAACL, ECCV. He actively reviews for NLP and ML conferences, and has served as an area chair and session chair for EMNLP 2022 and ACL 2021.

Work Experience

- **Senior Research Scientist**, Meta AI, Aug 2022 - Now

- **Research Scientist**, Meta AI, May 2021 - Aug 2022
  - Research: led research to improved Transformer architecture and pretraining techniques for long-context NLP tasks (NAACL 2022); Efficient Dense Retrieval with Boosting Training (NAACL 2022)
  - Open source: xformers: A flexible package for implementing various efficient attentions in Transformers (2.8k github stars)
  - Product: developed state-of-the-art long context summarization models that have been adopted in Meta's Horizon Workzooms.

- **Research Intern**, Facebook AI, Remote, Summer 2020
  - Built the first general multi-hop QA systems that can find answers from large open-domain corpus, without the need of hyperlinks (ICLR 2022), project lead of a team with 10 collaborators spanned over multiple locations (NYC, Bay Area, UK)

- **Research Intern**, Facebook AI, Menlo Park, Summer 2019
  - Worked on Knowledge Enhanced LM Pretraining, resulting in an improved model for various open-domain QA tasks and information extraction tasks (ICLR 2021)

- **Research Intern**, Salesforce Research (MetaMind), Palo Alto, Summer 2018
  - Worked on cutting edge question answering & reading comprehension technologies.

Education

- **University of California, Santa Barbara**
  Ph.D. in Computer Science, 2016-2021

- **University of Science and Technology of China** (Ranking: 2/67)
  B.E. in EE, 2012-2016.

Research Services

- **Area/Session Chairs**: EMNLP 2022, ACL 2021
- **Program Committee/Reviers**: NeurIPS 2022, ICLR 2022, 2021, EMNLP 2018, AAAI 2019, NAACL 2019, EMNLP 2019, AAAI 2020, MRQA 2019, EMNLP 2020, ACL 2020, ACL ARR

Publications

22. **Wenhan Xiong**, Barlas Oguz, Anchit Gupta, Xilun CHen, Diana Liskovich, Omer Levy, Wen-tau Yih, Yashar Mehdad, **"Simple Local Attentions Remain Competitive for Long-Context Tasks"**, NAACL 2022
21. Patrick Lewis, Barlas Oguz, **Wenhan Xiong**, Fabio Petroni, Wen-tau Yih, Sebastion Riedel, **"Boosted Dense Retriever"**, NAACL 2022
20. Sharon Levy, Kevin Mo, **Wenhan Xiong**, William Wang, **"Open-Domain Question-Answering for COVID-19 and Other Emergent Domains"**, EMNLP 2021
19. Liangmin Pan, Wenhu Chen, **Wenhan Xiong**, Min-Yen Kan, William Wang, **"Zero-shot Fact Verification by Chain Generation"**, ACL-IJCNLP 2021
18. Liangmin Pan, Wenhu Chen, **Wenhan Xiong**, Min-Yen Kan, William Wang, **"Unsupervised Multi-hop Question Answering by Question Generation"**, NAACL 2021
17. **Wenhan Xiong***,, Xiang Li*, Srini Iyer, Jingfei Du, Patrick Lewis, William Wang, Yashar Mehdad, Wen-tau Yih, Sebastian Riedel, Douwe Kiela, Barlas Oguz, **"Answering Complex Open-Domain Questions with Multi-Hop Dense Retrieval"**, ICLR 2021
16. **Wenhan Xiong***, Hong Wang*, William Wang, **"Progressively Pretrained Dense Corpus Index for Open-Domain Question Answering"**, EACL 2021
15. Wenhu Chen, Hanwen Zha, Zhiyu Chen, **Wenhan Xiong**, Hong Wang, William Wang, **"HybridQA: A Dataset of Multi-Hop Question Answering over Tabular and Textual Data"**, ICLR 2021
14. **Wenhan Xiong**, Jingfei Du, William Yang Wang, Veselin Stoyanov, **"Pretrained Encyclopedia: Weakly Supervised Knowledge-Pretrained Language Model"**, ICLR 2020
13. **Wenhan Xiong**, Mo Yu, Xiaoxiao Guo, Hong Wang, Shiyu Chang, Murray Campbell, William Yang Wang, **"Simple yet Effective Bridge Reasoning for Open-Domain Multi-Hop Question Answering"**, Machine Reading for Question Answering Workshop at EMNLP 2019
12. Haoyu Wang, Mo Yu, Xiaoxiao Guo, Rajarshi Das, **Wenhan Xiong**, Tian Guo, **"Do Multi-hop Readers Dream of Reasoning Chains?"**, Machine Reading for Question Answering Workshop at EMNLP 2019
11. Jiawei Wu, **Wenhan Xiong** and William Yang Wang, **"Learning to Learn and Predict: A Meta-Learning Approach for Multi-Label Classification"**, EMNLP 2019
10. **Wenhan Xiong**, Jiawei Wu, Hong Wang, Vivek Kulkarni, Mo Yu, Xiaoxiao Guo, Shiyu Chang and William Yang Wang, **"TweetQA: A Social Media Focused Question Answering Dataset"**, ACL 2019, Oral Presentation
9. **Wenhan Xiong**, Mo Yu, Shiyu Chang, Xiaoxiao Guo and William Yang Wang, **"Improving Question Answering over Incomplete KBs with Knowledge-Aware Reader"**, ACL 2019, Oral Presentation

8. Hong Wang, Xin Wang, **Wenhan Xiong**, Mo Yu, Xiaoxiao Guo, Shiyu Chang and William Yang Wang, **"Self-Supervised Learning for Contextualized Extractive Summarization"**, ACL 2019
7. **Wenhan Xiong**, Jiawei Wu, Deren Lei, Mo Yu, Shiyu Chang, Xiaoxiao Guo, William Yang Wang, **"Imposing Label-Relational Inductive Biasfor Extremely Fine-Grained Entity Typing"**, NAACL 2019
6. Hong Wang, **Wenhan Xiong**, Mo Yu, Xiaoxiao Guo, Shiyu Chang, William Yang Wang, **"Sentence Embedding Alignment for Lifelong Relation Extraction"**, NAACL 2019
5. **Wenhan Xiong**, Mo Yu, Shiyu Chang, Xiaoxiao Guo, William Yang Wang, **"One-Shot Relational Learning for Knowledge Graphs"**, EMNLP 2018
4. **Wenhan Xiong***, Xin Wang*, Hongmin Wang, William Yang Wang, **"Look Before You Leap: Bridging Model-Free and Model-Based Reinforcement Learning for Planned-Ahead Vision-and-Language Navigation"**, ECCV 2018
3. **Wenhan Xiong**, Xiaoxiao Guo, Mo Yu, Shiyu Chang, Bowen Zhou and William Yang Wang, **"Scheduled Policy Optimization for Natural Language Communication with Intelligent Agents"**, IJCAI-ECAI 2018, Oral Presentation
2. Wenhu Chen, **Wenhan Xiong**, Xifeng Yan and William Yang Wang, **"Variational Knowledge Graph Reasoning"**, NAACL 2018, Oral Presentation
1. **Wenhan Xiong**, Thien Hoang and William Yang Wang, **"DeepPath: A Reinforcement Learning Method for Knowledge Graph Reasoning"**, EMNLP 2017, Oral Presentation

Awards & Honors

- Summer Research Fellowship, University of California, Santa Barbara, 2017
- National Scholarship (4/291), University of Science and Technology of China, 2015
- Outstanding Research Performance, University of Western Australia, 2015
- Outstanding Student Scholarship (Gold Prize), University of Science and Technology of China, 2014

Teaching

- Teaching Assistant, CS32 Object Oriented Design and Implementation, UCSB, Spring 2017
- Teaching Assistant, CS171 Operating Systems, UCSB, Winter 2017
- Teaching Assistant, CS8 Intro to Programming, UCSB, Fall 2017

Talks

- Rebuilding Knowledge Access through Natural Language Processing, University of Rochester, 2023
- Scheduled Policy Optimization for Language Grounding, SoCal NLP Symposium 2018