

Hong Wang

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BIO

Hong Wang is an Applied Scientist at Amazon AWS. He got his Ph.D in Computer Science from UC Santa Barbara in 2023 and his B.S from Nanjing University, China in 2018. He has extensively worked on various NLP problems including Dialogue System, Question Answering, Information Retrieval and Large Language Models. He has published 10+ papers in top-tier AI conferences like ACL, NAACL, EMNLP, and ICLR and actively reviews for NLP and ML conferences. Hong Wang is dedicated to pushing the boundaries of NLP, aiming to bring tangible real-world benefits to a wider audience.

EDUCATION

University of California, Santa Barbara, Santa Barbara, California, USA

- Ph.D. in Computer Science Sep 2018 – Jun 2023
 - Advisor: Prof. Xifeng Yan
 - Focus: Natural Language Processing, Deep Learning
 - Chancellor's Fellowship for three years

Nanjing University, Nanjing, Jiangsu, China

- B.S. in Computer Science Sep 2014 – Jul 2018
 - Research assistant in Learning And Mining from DatA (LAMDA) Group
 - Excellent Bachelor Thesis Award
 - GPA Ranking 4/150

WORKING EXPERIENCE

Amazon AWS, Connect Wisdom Group, Seattle, WA

- Applied Scientist Jun 2023 – Now
 - Supervisor: Dr. Wei Niu

Amazon Alexa, Wakeword Group, Cambridge, MA

- Applied Scientist Intern Jun 2022 – Sep 2022
 - Supervisor: Dr. Gengshen Fu, Rajath Kumar
 - Project: Unified Wakeword and compact spoken language understanding under low-resource scenarios

Amazon Alexa, Wakeword Group, Cambridge, MA

- Applied Scientist Intern Jun 2021 – Sep 2021
 - Supervisor: Dr. Gengshen Fu, Dr. Bo Xiao
 - Project: Unified Wakeword and intent detection on device

Meta AI, Language and Translation Technologies (LATTE) Group, Menlo Park, CA

- Research Intern Jun 2020 – Sep 2020
 - Supervisor: Dr. Ves Stoyanov
 - Project: Memory augmented pretrained language model

Microsoft Research Asia, Machine Learning Group, Beijing, China

- Software Engineer Intern Oct 2017 – Jan 2018
 - Supervisor: Dr. Tao Qin
 - Project: Classification systems and models for ads relevance and click prediction

SKILLS

- **Programming Language:** Python, C, C++
- **Machine Learning:** Tensorflow, Pytorch, Spark, Transformers, Fairseq, Dialogue System, Question Answering, Information Retrieval, Language Model Pretraining
- **Computer Science:** SQL, Compiler, Operating System, Distributed System, Networking, Edge Computing, Database, Data Structure, Algorithms

PUBLICATIONS

CONFERENCES

- [1] Jing Qian*, Hong Wang*, Zekun Li, Shiyang Li, Xifeng Yan, "Limitations of Language Models in Arithmetic and Symbolic Induction", in *Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (ACL 2023)*, Toronto, Canada, Jul 2023.

- [2] Zekun Li, Wenhu Chen, Shiyang Li, Hong Wang, Jing Qian, Xifeng Yan, “Dialogic: Controllable Dialogue Simulation with In-Context Learning”, in *Findings of the Conference on Empirical Methods in Natural Language Processing (Findings of EMNLP 2022)*, Abu Dhabi, Dec 2022
- [3] Zekun Li*, Hong Wang*, Alon Albalak, Yingrui Yang, Jing Qian, Shiyang Li, Xifeng Yan, “Making Something out of Nothing: Building Robust Task-oriented Dialogue Systems from Scratch”, in *Proceedings of Alexa Prize TaskBot*, Jun 2022.
- [4] Jing Qian, Hong Wang, Mai ElSherief, Xifeng Yan, “Lifelong Learning of Hate Speech Classification on Social Media”, in *Proceedings of 2021 Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL-HLT 2021)*, online, Jun 2021.
- [5] Hong Wang*, Wenhan Xiong*, William Yang Wang, “Progressively Pretrained Dense Corpus Index for Open-Domain Question Answering”, in *Proceedings of the 16th conference of the European Chapter of the Association for Computational Linguistics (EACL 2021)*, online, Apr 2021.
- [6] 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”, In *Findings of the Conference on Empirical Methods in Natural Language Processing (Findings of EMNLP 2020)*, online, Nov 2020.
- [7] Wenhu Chen, Hongmin Wang, Jianshu Chen, Yunkai Zhang, Hong Wang, Shiyang Li, Xiyu Zhou and William Yang Wang, “TabFact: A Large-scale Dataset for Table-based Fact Verification”, In *Proceedings of the 8th International Conference on Learning Representations (ICLR 2020)*, Addis Ababa, Ethiopia, Apr 2020.
- [8] Hong Wang, Xin Wang, Wenhan Xiong, Mo Yu, Xiaoxiao Guo, Shiyu Chang and William Wang, “Self-Supervised Learning for Contextualized Extractive Summarization”, in *Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics (ACL 2019)*, Florence, Italy, Jul 2019.
- [9] Wenhan Xiong, Jiawei Wu, Hong Wang, Vivek Kulkarni, Mo Yu, Xiaoxiao Guo, Shiyu Chang and William Wang, “TweetQA: A Social Media Focused Question Answering Dataset”, in *Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics (ACL 2019)*, Florence, Italy, Jul 2019.
- [10] Hong Wang, Wenhan Xiong, Mo Yu, Xiaoxiao Guo, Shiyu Chang and William Wang, “Sentence Embedding Alignment for Lifelong Relation Extraction”, in *Proceedings of the 17th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT 2019)*, Minneapolis, MN, USA, Jun 2019.
- [11] Hong Wang, Hong Qian and Yang Yu, “Noisy derivative-free optimization with value suppression”, in *Proceedings of the 32nd AAAI Conference on Artificial Intelligence (AAAI 2018)*, New Orleans, LA, USA, Feb 2018.

PREPRINTS

- [1] Hong Wang, Xuan Luo, Weizhi Wang, Xifeng Yan, “Bot or Human? Detecting ChatGPT Imposters with A Single Question”, technical report, May 2023
- [2] Shiyang Li, Jianshu Chen, Yelong Shen, Zhiyu Chen, Xinlu Zhang, Zekun Li, Hong Wang, Jing Qian, Baolin Peng, Yi Mao, Wenhu Chen, Xifeng Yan, “Explanations from Large Language Models Make Small Reasoners Better”, technical report, Oct 2022
- [3] Wenhan Xiong, Mo Yu, Xiaoxiao Guo, Hong Wang, Shiyu Chang, Murray Campbell and William Wang, “Simple yet Effective Bridge Reasoning for Open-Domain Multi-Hop Question Answering”, MRQA: Machine Reading for Question Answering workshop at EMNLP-IJCNLP 2019, Hong Kong, China, Nov 2019.
- [4] Hong Wang, Christfried Focke, Rob Sylvester, Nilesch Mishra and William Wang, “Fine-tune Bert for DocRED with Two-step Process”, technical report, Sep 2019.
- [5] Hong Wang, Wenhan Xiong, Mo Yu, Xiaoxiao Guo, Shiyu Chang and William Wang, “Meta Reasoning over Knowledge Graphs”, technical report, Jun 2019.

PATENTS

- [1] Hong Wang, Gengshen Fu, Bo Xiao and Tao Zhang, “Unified wakeword and language understanding processing”, patent submitted, Sep 2021.

AWARDS & HONORS	Chancellor’s Fellowship , University of California, Santa Barbara	Sep 2022
	Chancellor’s Fellowship , University of California, Santa Barbara	Sep 2020
	Chancellor’s Fellowship , University of California, Santa Barbara	Sep 2018
	Outstanding Undergraduate Award , Nanjing University	Jun 2018
	Excellent Bachelor Thesis Award , Nanjing University	Jun 2018
	National Scholarship , Ministry of Education, China	2016 – 2017
	National Endeavor Scholarship , Ministry of Education, China	2014 – 2016

SERVICE

COMMITTEE MEMBER & REVIEWER

- Conference on Empirical Methods in Natural Language Processing and 9th International Joint Conference on Natural Language Processing (EMNLP-IJCNLP-19), 2019
- The Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI-20), 2020
- The 58th annual meeting of the Association for Computational Linguistics (ACL-20), 2020
- The Conference on Empirical Methods in Natural Language Processing (EMNLP-20), 2020
- The 1st Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics and the 10th International Joint Conference on Natural Language Processing (AACL-IJCNLP-20), 2020
- The Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI-21), 2021
- The 16th conference of the European Chapter of the Association for Computational Linguistics (EACL-21), 2021.
- The Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL-HLT-21), 2021
- The Joint Conference of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing (ACL-IJCNLP 21), 2021
- The 10th CCF International Conference on Natural Language Processing and Chinese Computing (NLPCC2021), 2021
- The thirty-fifth Conference on Neural Information Processing Systems (NeurIPS 2021), 2021
- ACL Rolling Review November, 2021
- ACL Rolling Review December, 2021
- The Tenth International Conference on Learning Representations (ICLR 2022), 2022
- The 13th Edition of its Language Resources and Evaluation Conference (LREC 2022), 2022
- The 39th International Conference on Machine Learning (ICML 2022), 2022
- The thirty-sixth Conference on Neural Information Processing Systems (NeurIPS 2022), 2022
- The 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP 2022), 2022
- The 17th Conference of the European Chapter of the Association for Computational Linguistics (EACL-23), 2023
- The 40th International Conference on Machine Learning (ICML 2023), 2023
- The 61st Annual Meeting of the Association for Computational Linguistics (ACL-23), 2023
- 29TH ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2023)
- The 8th Workshop on Representation Learning for NLP (RepL4NLP 2023), 2023
- The Thirty-seventh Conference on Neural Information Processing Systems (NeurIPS 2023), 2023

TEACHING

- Teaching Assistant, CS165B, Machine Learning, Fall 2019, UCSB
- Teaching Assistant, CS165B, Machine Learning, Spring 2020, UCSB
- Teaching Assistant, CS165B, Machine Learning, Spring 2021, UCSB

TALKS & PRESENTATIONS

- **Sentence Embedding Alignment for Lifelong Relation Extraction.** May 2019
- IBM invited online talk

[Last updated on 2023-10-04]