

Research Interests

My research interests are in Natural Language Processing and Machine Learning. Specifically, multi-modal representation learning, multilingual natural language understanding, question answering and knowledge graph.

EDUCATION

- **Peking University** Beijing, China
Master of Science in Computer Science Sep. 2013 – Jul. 2016
- **Nanjing Agricultural University** Nanjing, China
Bachelor of Engineering in Computer Science Sep. 2009 – Jul. 2013

PUBLICATIONS (* indicates equal contribution.)

• In Proceedings

- [1] Leveraging Knowledge in Multilingual Commonsense Reasoning
Yuwei Fang, Shuohang Wang, Yichong Xu, Ruochen Xu, Siqi Sun, Chenguang Zhu, Michael Zeng
Findings of Association for Computational Linguistics (Findings of ACL), 2022.
- [2] Training Data is More Valuable than You Think: A Simple and Effective Method by Retrieving from Training Data
Shuohang Wang, Yichong Xu, **Yuwei Fang**, Yang Liu, Siqi Sun, Ruochen Xu, Chenguang Zhu, Michael Zeng
Association for Computational Linguistics (ACL), 2022.
- [3] KG-FiD: Infusing Knowledge Graph in Fusion-in-Decoder for Open-Domain Question Answering
Donghan Yu, Chenguang Zhu, **Yuwei Fang**, Wenhao Yu, Shuohang Wang, Yichong Xu, Xiang Ren, Yiming Yang, Michael Zeng.
Association for Computational Linguistics (ACL), 2022.
- [4] Dict-BERT: Enhancing Language Model Pre-training with Dictionary
Wenhao Yu, Chenguang Zhu, **Yuwei Fang**, Donghan Yu, Shuohang Wang, Yichong Xu, Michael Zeng, Meng Jiang
Findings of Association for Computational Linguistics (Findings of ACL), 2022.
- [5] RetGen: A Joint framework for Retrieval and Grounded Text Generation Modeling
Yizhe Zhang, Siqi Sun, Xiang Gao, **Yuwei Fang**, Chris Brockett, Michel Galley, Jianfeng Gao, Bill Dolan
Proc. American Association of Artificial Intelligence AAAI, 2022.
- [6] FILTER: An enhanced fusion method for cross-lingual language understanding
Yuwei Fang*, Shuohang Wang*, Zhe Gan, Siqi Sun, Jingjing Liu
Proc. American Association of Artificial Intelligence (AAAI), 2021.
- [7] LightningDOT: Pre-training Visual-Semantic Embeddings for Real-Time Image-Text Retrieval
Siqi Sun*, Yen-Chun Chen*, Linjie Li, Shuohang Wang, **Yuwei Fang**, Jingjing Liu
Conf. on North American Chapter of the Association for Computational Linguistics, (NAACL), 2021.
- [8] Cluster-former: Clustering-based sparse transformer for long-range dependency encoding
Shuohang Wang, Luowei Zhou, Zhe Gan, Yen-Chun Chen, **Yuwei Fang**, Siqi Sun, Yu Cheng, Jingjing Liu
Findings of Association for Computational Linguistics (Findings of ACL), 2021.
- [9] Hierarchical graph network for multi-hop question answering
Yuwei Fang, Siqi Sun, Zhe Gan, Rohit Pillai, Shuohang Wang, Jingjing Liu
Conf. on Empirical Methods in Natural Language Processing (EMNLP), 2020.
- [10] Cross-Thought for Sentence Encoder Pre-training
Shuohang Wang, **Yuwei Fang**, Siqi Sun, Zhe Gan, Yu Cheng, Jing Jiang, Jingjing Liu
Conf. on Empirical Methods in Natural Language Processing (EMNLP), 2020.
- [11] Contrastive Distillation on Intermediate Representations for Language Model Compression
Siqi Sun, Zhe Gan, Yu Cheng, **Yuwei Fang**, Shuohang Wang, Jingjing Liu
Conf. on Empirical Methods in Natural Language Processing (EMNLP), 2020.

• arXiv preprints

- [1] i-Code: An Integrative and Composable Multimodal Learning Framework
Ziyi Yang*, **Yuwei Fang***, Chenguang Zhu, Reid Pryzant, Dongdong Chen, Yu Shi, Yichong Xu, Yao Qian, Mei Gao, Yi-Ling Chen, Liyang Lu, Yujia Xie, Robert Gmyr, Noel Codella, Naoyuki Kanda, Bin Xiao, Yuan Lu, Takuya Yoshioka, Michael Zeng, Xuedong Huang
arXiv preprint arXiv:2205.01818.

- [2] Does Knowledge Help General NLU? An Empirical Study
Ruochen Xu*, **Yuwei Fang***, Chenguang Zhu, Michael Zeng
arXiv preprint arXiv:2109.00563.
- [3] Accelerating Real-Time Question Answering via Question Generation
Yuwei Fang, Shuohang Wang, Zhe Gan, Siqi Sun, Jingjing Liu
arXiv preprint arXiv:2009.05167.
- [4] Stochastic answer networks for squad 2.0
Xiaodong Liu, Wei Li, **Yuwei Fang**, Aerin Kim, Kevin Duh, Jianfeng Gao
arXiv preprint arXiv:1809.09194.

EXPERIENCE

- **Microsoft Cloud and AI** Redmond, WA
Applied Scientist II *Apr. 2019 - Present*
 - Manager: Dr. Chenguang Zhu and Prof. Jingjing Liu
 - Research topics: Multimodal Learning; Multilingual NLU; Knowledge for NLP; Question Answering
- **Microsoft STCA** Suzhou, China
Software Engineer *Jul. 2016 - Apr. 2019*
 - Important Email Ranking: We conducted from the research, experiment and prototype for the important email ranking and ‘top interest’ scenarios which were deployed to the Outlooks services.
 - Universal Language Understanding: We pursued R&D efforts on universal language understanding for Cortana.
 - Winner of Microsoft Suzhou Site Hackathon 2017: “Most Intelligent Product”
- **Microsoft Research Asia** Beijing, China
Research Intern *Mar. 2014 - Aug. 2014*
 - Mentor: Dr. Yujing Wang
 - Research Topic: Semantic Tag Suggestion
- **Peking University** Beijing, China
Research Assistant *Sep. 2014 - Jul. 2016*
 - Advisor: Prof. Huisheng Chi and Prof. Xihong Wu
 - Research topics: Syntactic Parsing ; Chinese Word Segmentation; Language Modeling

COMPETITIONS

- 2022/05: Achieve 1st human parity on [HellaSwag](#) leaderboard
- 2022/05: Rank 1st on [CommonGen](#) and [CREAK](#) leaderboards
- 2021/10: Rank 1st on [XCSR](#) leaderboard
- 2020/09: Rank 1st on [NaturalQuestions](#) leaderboard
- 2020/09: Rank 1st on [XTREME](#) and [XGLUE](#) leaderboards
- 2019/12: Rank 1st on [HotpotQA](#) leaderboard
- 2019/09: Rank 1st on [ARC Easy](#), [ARC-Challenge](#) and [Commonsense QA](#) leaderboards
- 2019/06: Rank 2nd in [Visual Dialog Challenge 2019](#)

MENTORED INTERNS

- Donghan Yu (2021), Carnegie Mellon University. Our paper is accepted by ACL 2022.
- Wenhao Yu (2021), University of Notre Dame. Our paper is accepted by ACL 2022.

TEACHING EXPERIENCE

- **Peking University: Discrete Mathematics** Spring 2014
Teaching assistant for Prof. Yongzhi Cao
- **Peking University: Speech Signal Processing** Spring 2015
Teaching assistant for Prof. Xihong Wu

PROFESSIONAL ACTIVITIES

- **Conference Reviewer/PC Member** EMNLP 2021, AAAI 2022, ACL 2022, NAACL 2022, EMNLP 2022