Yue FENG

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EDUCATION

University College London (UCL), United Kingdom   Sep 2020 - now
Department of Computer Science.
PhD in Foundational Artificial Intelligence; Advisor: Prof. Emine Yilmaz.

University of Chinese Academy of Sciences (UCAS), China   Sep 2016 - Jul 2019
Institute of Computing Technology.
Master in Computer Science; Major GPA: *3.8/4.0*; Advisor: Prof. Jun Xu and Prof. Jiafeng Guo.

Harbin Institute of Technology(HIT), China   Sep 2012 - Jul 2016
School of Software Engineering.
Bachelor in Computer Science; Major GPA: *3.85/4.0*.

RESEARCH INTEREST

Natural language processing, information retrieval, data mining and machine learning, with an emphasis on dialogue systems, question answering, ranking and relevance, text matching, text mining, knowledge graph, and deep learning. I published papers in top conferences in IR (SIGIR, WSDM, CIKM) and NLP (ACL, AAAI).

WORK EXPERIENCE

ByteDance AI Lab, ByteDance Inc, China.   Jun 2020 - Sep 2020
Research Intern: Dialogue Systems; Mentor: Dr. Hang Li.

- I worked on a project of dialog state tracking. We propose a sequence-to-sequence framework for dialogue understanding to jointly model intents, slots, and slot values. It can leverage rich representations of utterances and deal with categorical slots, non-categorical slots, and unseen domains. This paper is published in **ACL'21**.

Baidu Research, Baidu Inc, China.   Mar 2020 - Jun 2020
Research Intern: Question Answering; Mentor: Dr. Ping Li.

- I worked on a project of E-commerce question answering. We try to grasp logical information and construct reasoning based on the review and product attribute heterogeneous graph to generate an explainable natural answer for the complex question. This paper is published in **SIGIR'21**.

RESEARCH EXPERIENCE

University College London (UCL), United Kingdom.   Sep 2020 - now
Research Assistant: Dialogue Systems; Advisor: Prof. Emine Yilmaz.

- My research focus is on conversational AI. I propose a dynamic schema graph fusion network to explicitly fuse the prior slot relations and the dynamic slot relations in task-oriented dialogue. It also uses dynamic schema graph to facilitate knowledge transfer to new domains. This paper is published in **ACL'22**.

University of Chinese Academy of Sciences, China.   Sep 2016 - Jul 2019
Research Assistant: Information Retrieval; Advisor: Prof. Jun Xu and Prof. Jiafeng Guo.

- My master thesis uses reinforced learning to alleviate the local optimal problem in diversity ranking. It studies the sequential document ranking process, the exploratory decision-making framework, and the efficiency improvement of exploratory decision-making. Several papers are published in **SIGIR'18, AAAI'19, CIKM'20**.

PUBLICATIONS

(Google Scholar)

- **Yue Feng**, Aldo Lipani, Fanghua Ye, Qiang Zhang, and Emine Yilmaz. Dynamic Schema Graph Fusion Network for Multi-Domain Dialogue State Tracking. Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (**ACL'22**).

- Fanghua Ye, **Yue Feng**, and Emine Yilmaz. ASSIST: Towards Label Noise-Robust Dialogue State Tracking. Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (**Findings of ACL'22**).

- **Yue Feng**, Yang Wang, and Hang Li. A Sequence-to-Sequence Approach to Dialogue State Tracking. Proceedings of the 59th Annual Meeting of the Association for Computational Linguistics (**ACL'21**).

- **Yue Feng**, Zhaochun Ren, Weijie Zhao, Mingming Sun and Ping Li. Multi-Type Textual Reasoning for Product-Aware Answer Generation. Proceedings of the 44th International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR'21**).

- **Yue Feng**, Miao Fan, Mingming Sun and Ping Li. A Reinforced Semi-supervised Neural Network for Helpful Review Identification. Proceedings of the 29th ACM International Conference on Information and Knowledge Management (**CIKM'20**).

- Jingyuan Zhang, Mingming Sun, **Yue Feng**, and Ping Li. Learning Interpretable Relationships between Entities, Relations and Concepts via Bayesian Structure Learning on Open Domain Facts. Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics (**ACL'20**).

- Zhaohui Li, **Yue Feng**, Jun Xu, Jiafeng Guo, Yanyan Lan, and Xueqi Cheng. Teaching Machines to Extract Main Content for Machine Reading Comprehension. Proceedings of the 33th AAAI Conference on Artificial Intelligence (**AAAI'19**).

- **Yue Feng**, Jun Xu, Yanyan Lan, Jiafeng Guo, Wei Zeng, and Xueqi Cheng. From Greedy Selection to Exploratory Decision-Making: Diverse Ranking with Policy-Value Networks. Proceedings of the 41st annual international ACM SIGIR conference on Research and development in information retrieval (**SIGIR'18**).

- Miao Fan, Wutao Lin, **Yue Feng**, Mingming Sun, and Ping Li. A Globalization-Semantic Matching Neural Network for Paraphrase Identification. Proceedings of the 27th ACM International Conference on Information and Knowledge Management (**CIKM'18**).

- Jingyuan Zhang, Xin Wang, **Yue Feng**, Mingming Sun and Ping Li. FastInput: Improving Input Efficiency on Mobile Devices. Proceedings of the 27th ACM International Conference on Information and Knowledge Management (**CIKM'18**).

- Mingming Sun, Xu Li, Xin Wang, Miao Fan, **Yue Feng**, and Ping Li. Logician: A Unified End-to-End Neural Approach for Open-Domain Information Extraction. The 11th ACM International Conference on Web Search and Data Mining (**WSDM'18**).

- Miao Fan, **Yue Feng**, Mingming Sun, Ping Li, Haifeng Wang, Jianmin Wang. Multi-Task Neural Learning Architecture for End-to-End Identification of Helpful Reviews. The 2018 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (**ASONAM'18**).

PATENTS

- Miao Fan, **Yue Feng**, Chao Feng, Mingming Sun, Ping Li, Haifeng Wang. Method, apparatus, device and storage medium for evaluating quality of answer. US Patent App. 16/709,304, 2020.

- Miao Fan, **Yue Feng**, Mingming Sun, Ping Li. Method, apparatus and storage medium for updating model parameter. US Patent App. 16/986,092, 2020.

- Miao Fan, **Yue Feng**, Mingming Sun, Ping Li, Haifeng Wang. Method, apparatus for evaluating review, device and storage medium. US Patent App. 16/421,921, 2019.

PROJECTS

- **Alexa Prize TaskBot**: A conversational AI challenge to incorporate multimodal (voice and vision) customer experiences. This challenge consists of building a TaskBot to help customers complete complex tasks in two domains, cooking and DIY. More details.

- **Easy Machine Learning**: This platform presents a general-purpose dataflow-based system for easing the process of applying machine learning algorithms to real world tasks. More details.

ACADEMIC SERVICES

- PC Member of EMNLP, WSDM 2022
- PC Member of SIGIR, CIKM, ACL, EMNLP 2021
- Journal reviewer of Information Processing and Management
- Journal reviewer of Asian and Low-Resource Language Information Processing

HONORS AND AWARDS

- SIGIR, ACL 2021 Student Travel Award
- CIKM, ACL 2020 Student Travel Award
- AAAI 2019 Student Travel Award
- SIGIR, CIKM, WSDM 2018 Student Travel Award
- 2020 Baidu Excellent Research Intern Star Award
- 2016 National Scholarship in China (top 0.1%)

SKILLS

- **Programming**: Python, Java, C++, SQL, MATLAB, Shell Scripting, Qt, LaTeX.
- **Theory**: Foundation of algorithms, math, NLP, IR, machine learning and data mining.
- **System**: Linux/Unix, Mac OS X, Windows, MySQL/SQL Server.
- **Tools**: Weka, LibSVM/SVMlight, Mallet, Numpy&SciPy, Pandas, Scikit-learn, Theano, TensorFlow, Keras, PyTorch, MXNet, NLP pipelines (Stanford NLP, OpenNLP), NLTK, LP_solver, CPLEX & many optimization toolkits.