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Education

PhD, The Chinese University of Hong Kong, Hong Kong SAR, 2023
Master, Peking University, China, 2019
Bachelor of Engineering, Beijing University of Posts and Telecommunications, China, 2016

Academic Appointments

Assistant Professor of Computer Science, School of Computing and Information Systems, SMU, July 2024 - Present

RESEARCH

Research Interests

Proactive Conversational and Interactive Systems
Trust and Reliability of Large Language Models
Language Model Powered Agents
Human-centered Natural Language Processing and Information Retrieval

Publications

Journal Articles [Refereed]

A Unified Framework for Contextual and Factoid Question Generation, by DONG, Chenhe; SHEN, Ying; LIN, Shiyang; LIN Zhenzhou; DENG, Yang. (2024). *IEEE Transactions on Knowledge and Data Engineering*, 36(1), 21-34. <https://doi.org/10.1109/TKDE.2023.3280182> (Published)

A Survey on Aspect-Based Sentiment Analysis: Tasks, Methods, and Challenges, by ZHANG, Wenxuan; LI, Xin; DENG, Yang; BING, Lidong; LAM, Wai. (2023). *IEEE Transactions on Knowledge and Data Engineering*, 35(11), 11019-11038. <https://doi.org/10.1109/TKDE.2022.3230975> (Published)

Leveraging Long Short-Term User Preference in Conversational Recommendation via Multi-agent Reinforcement

Learning, by DENG, Yang; LI, Yaliang; DING, Bolin; LAM, Wai. (2023). *IEEE Transactions on Knowledge and Data Engineering*, 35(11), 11541-11555. <https://doi.org/10.1109/TKDE.2022.3225109> (Published)

A Unified Multi-task Learning Framework for Multi-goal Conversational Recommender Systems, by DENG, Yang; ZHANG, Wenxuan; XU, Weiwen; LEI, Wenqiang; CHUA, Tat-Seng; LAM, Wai. (2023). *ACM Transactions on Information Systems*, 41(3), 77:1-77:25. <https://doi.org/10.1145/3570640> (Published)

Contextualized Knowledge-aware Attentive Neural Network: Enhancing Answer Selection with Knowledge, by DENG, Yang; XIE, Yuexiang; LI, Yaliang; YANG, Min; LAM, Wai; SHEN, Ying. (2022). *ACM Transactions on Information Systems*, 40(1), 2:1-2:33. <https://doi.org/10.1145/3457533> (Published)

Toward Personalized Answer Generation in E-Commerce via Multi-perspective Preference Modeling, By DENG, Yang; LI, Yaliang; ZHANG, Wenxuan; DING, Bolin; LAM, Wai. (2022). *ACM Transactions on Information Systems*, 40(4), 87:1-87:28. <https://doi.org/10.1145/3507782> (Published)

Conference Proceedings

Plug-and-Play Policy Planner for Large Language Model Powered Dialogue Agents, by DENG, Yang; ZHANG, Wenxuan; LAM, Wai; NG, See-Kiong; CHUA, Tat-Seng. (2024). *Proceedings of The Twelfth International Conference on Learning Representations (ICLR)*, Vienna, Austria, May 7-11, 2024. (Accepted)

Prompting and evaluating large language models for proactive dialogues: Clarification, target-guided, and non-collaboration, by DENG, Yang; LIAO, Lizi; CHEN, Liang; WANG, Hongru; LEI, Wenqiang; CHUA, Tat-Seng. (2023). *Findings of the Association for Computational Linguistics: EMNLP 2023*, (pp. 10602-10621) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2023.findings-emnlp.711> (Published)

Beyond Factuality: A Comprehensive Evaluation of Large Language Models as Knowledge Generators, by CHEN, Liang; DENG, Yang; BIAN, Yatao; QIN, Zeyu; WU, Bingzhe; CHUA, Tat-Seng; WONG, Kam-Fai. (2023). *Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing*, Singapore, December 6-10, (pp. 6325-6341) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2023.emnlp-main.390> (Published)

Attack Prompt Generation for Red Teaming and Defending Large Language Models, by DENG, Boyi; WANG, Wenjie; FENG, Fuli; DENG, Yang; WANG, Qifan; HE, Xiangnan. (2023). *Findings of the Association for Computational Linguistics: EMNLP 2023*, (pp. 2176-2189) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2023.findings-emnlp.143> (Published)

DepWiGNN: A Depth-wise Graph Neural Network for Multi-hop Spatial Reasoning in Text, by LI, Shuaiyi; DENG, Yang; LAM, Wai. (2023). *Findings of the Association for Computational Linguistics: EMNLP 2023*, (pp. 6459-6471) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2023.findings-emnlp.428> (Published)

Unifying Text, Tables, and Images for Multimodal Question Answering, by LUO, Haohao; SHEN, Ying; DENG, Yang. (2023). *Findings of the Association for Computational Linguistics: EMNLP 2023*, (pp. 9355-9367) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2023.findings-emnlp.626> (Published)

Large Language Models as Source Planner for Personalized Knowledge-grounded Dialogues, by WANG, Hongru; HU, Minda; DENG, Yang; WANG, Rui; MI, Fei; WANG, Weichao; WANG, Yasheng; KWAN, Wai-Chung; KING, Irwin; WONG, Kam-Fai. (2023). *Findings of the Association for Computational Linguistics: EMNLP 2023*, (pp. 9556-9569) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2023.findings-emnlp.641> (Published)

Cue-CoT: Chain-of-thought Prompting for Responding to In-depth Dialogue Questions with LLMs, by WANG, Hongru; WANG, Rui; MI, Fei; DENG, Yang; WANG, Zezhong; LIANG, Bin; XU, Ruifeng; WONG, Kam-Fai. (2023). *Findings of the Association for Computational Linguistics: EMNLP 2023*, (pp. 12047-12064) USA: Association for Computational

Linguistics. <https://doi.org/10.18653/v1/2023.findings-emnlp.806> (Published)

A Survey on Proactive Dialogue Systems: Problems, Methods, and Prospects, by DENG, Yang; LEI, Wenqiang; LAM, Wai; CHUA, Tat-Seng. (2023). *Proceedings of the Thirty-Second International Joint Conference on Artificial Intelligence, IJCAI 2023*, 19th-25th August 2023, Macao SAR, China, (pp. 6583-6591) USA: ijcai.org. <https://doi.org/10.24963/ijcai.2023/738> (Published)

Learning to Ask Clarification Questions with Spatial Reasoning, by DENG, Yang; LI, Shuaiyi; LAM, Wai. (2023). *Proceedings of the 46th International ACM SIGIR Conference on Research and Development in Information Retrieval, SIGIR 2023*, Taipei, Taiwan, July 23-27, 2023, (pp. 2113-2117) USA: ACM. <https://doi.org/10.1145/3539618.3592009> (Published)

Knowledge-enhanced Mixed-initiative Dialogue System for Emotional Support Conversations, by DENG, Yang; ZHANG, Wenxuan; YUAN, Yifei; LAM, Wai. (2023). *Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics, ACL 2023*, Toronto, Canada, July 9-14, 2023, (pp. 4079-4095) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2023.acl-long.225> (Published)

Towards Robust Personalized Dialogue Generation via Order-Insensitive Representation Regularization, by CHEN, Liang; WANG, Hongru; DENG, Yang; KWAN, Wai-Chung; WANG, Zezhong; WONG, Kam-Fai. (2023). *Findings of the Association for Computational Linguistics: ACL 2023*, Toronto, Canada, July 9-14, 2023, (pp. 7337-7345) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2023.findings-acl.462> (Published)

PeerDA: Data Augmentation via Modeling Peer Relation for Span Identification Tasks, by XU, Weiwen; LI, Xin; DENG, Yang; LAM, Wai; BING, Lidong. (2023). *Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics, ACL 2023*, Toronto, Canada, July 9-14, 2023, (pp. 8681-8699) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2023.acl-long.484> (Published)

Product Question Answering in E-Commerce: A Survey, by DENG, Yang; ZHANG, Wenxuan; YU, Qian; LAM, Wai. (2023). *Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics, ACL 2023*, Toronto, Canada, July 9-14, 2023, (pp. 11951-11964) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2023.acl-long.667> (Published)

ConReader: Exploring Implicit Relations in Contracts for Contract Clause Extraction, by XU, Weiwen; DENG, Yang; LEI, Wenqiang; ZHAO, Wenlong; CHUA, Tat-Seng; LAM, Wai. (2022). *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing, EMNLP 2022*, Abu Dhabi, United Arab Emirates, December 7-11, 2022, (pp. 2581-2594) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2022.emnlp-main.166> (Published)

PACIFIC: Towards Proactive Conversational Question Answering over Tabular and Textual Data in Finance, by DENG, Yang; LEI, Wenqiang; ZHANG, Wenxuan; LAM, Wai; CHUA, Tat-Seng. (2022). *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing, EMNLP 2022*, Abu Dhabi, United Arab Emirates, December 7-11, 2022, (pp. 6970-6984) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2022.emnlp-main.469> (Published)

User Satisfaction Estimation with Sequential Dialogue Act Modeling in Goal-oriented Conversational Systems, by DENG, Yang; ZHANG, Wenxuan; LAM, Wai; CHENG, Hong; MENG, Helen. (2022). *Proceedings of the ACM Web Conference 2022*, Virtual Event, Lyon, France, April 25 - 29, 2022, (pp. 6970-6984) USA: ACM. <https://doi.org/10.1145/3485447.3512020> (Published)

Towards Generative Aspect-Based Sentiment Analysis, by ZHANG, Wenxuan; LI, Xin; DENG, Yang; BING, Lidong; LAM, Wai. (2021). *Proceedings of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing, ACL/IJCNLP 2021*, Virtual Event, August 1-6, 2021, (pp. 504-510) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2021.acl-short.64>

(Published)

Factual Consistency Evaluation for Text Summarization via Counterfactual Estimation, by XIE, Yuexiang; SUN, Fei; DENG, Yang; LI, Yaliang; DING, Bolin. (2021). *Findings of the Association for Computational Linguistics: EMNLP 2021*, Virtual Event / Punta Cana, Dominican Republic, 16-20 November, 2021, (pp. 100-110) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2021.findings-emnlp.10> (Published)

Exploiting Reasoning Chains for Multi-hop Science Question Answering, by XU, Weiwen; DENG, Yang; ZHANG, Huihui; CAI, Deng; LAM, Wai. (2021). *Findings of the Association for Computational Linguistics: EMNLP 2021*, Virtual Event / Punta Cana, Dominican Republic, 16-20 November, 2021, (pp. 1143-1156) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2021.findings-emnlp.99> (Published)

Aspect-based Sentiment Analysis in Question Answering Forums, by ZHANG, Wenxuan; DENG, Yang; LI, Xin; BING, Lidong; LAM, Wai. (2021). *Findings of the Association for Computational Linguistics: EMNLP 2021*, Virtual Event / Punta Cana, Dominican Republic, 16-20 November, 2021, (pp. 4582-4591) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2021.findings-emnlp.390> (Published)

Aspect Sentiment Quad Prediction as Paraphrase Generation, by ZHANG, Wenxuan; DENG, Yang; LI, Xin; YUAN, Yifei; BING, Lidong; LAM, Wai. (2021). *Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing, EMNLP 2021*, Virtual Event / Punta Cana, Dominican Republic, 16-20 November, 2021, (pp. 9209-9219) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2021.emnlp-main.726> (Published)

Unified Conversational Recommendation Policy Learning via Graph-based Reinforcement Learning, by DENG, Yang; LI, Yaliang; SUN, Fei; DING, Bolin; LAM, Wai. (2021). *Proceedings of the 44th International ACM SIGIR Conference on Research and Development in Information Retrieval*, Virtual Event, Canada, July 11-15, 2021, (pp. 1431-1441) USA: ACM. <https://doi.org/10.1145/3404835.3462913> (Published)

Joint Learning of Answer Selection and Answer Summary Generation in Community Question Answering, by DENG, Yang; LAM, Wai; XIE, Yuexiang; CHEN, Daoyuan; LI, Yaliang; YANG, Min; SHEN, Ying. (2020). *Proceedings of the Thirty-Fourth AAAI Conference on Artificial Intelligence, AAAI 2020*, New York, NY, USA, February 7-12, 2020, (pp. 7651-7658) USA: AAAI Press. <https://doi.org/10.1609/aaai.v34i05.6266> (Published)

Opinion-aware Answer Generation for Review-driven Question Answering in E-Commerce, by DENG, Yang; ZHANG, Wenxuan; LAM, Wai. (2020). *Proceedings of the 29th ACM International Conference on Information and Knowledge Management*, Virtual Event, Ireland, October 19-23, 2020, (pp. 255-264) USA: ACM. <https://doi.org/10.1145/3340531.3411904> (Published)

AnswerFact: Fact Checking in Product Question Answering, by ZHANG, Wenxuan; DENG, Yang; MA, Jing; LAM, Wai. (2020). *Proceedings of the 2020 Conference on Empirical Methods in Natural Processing, EMNLP 2020*, Online, November 16-20, 2020 (pp. 2407-2417) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2020.emnlp-main.188> (Published)

Multi-hop Inference for Question-driven Summarization, by DENG, Yang; ZHANG, Wenxuan; LAM, Wai. (2020). *Proceedings of the 2020 Conference on Empirical Methods in Natural Processing, EMNLP 2020*, Online, November 16-20, 2020 (pp. 6734-6744) USA: Association for Computational Linguistics. <https://doi.org/10.18653/v1/2020.emnlp-main.547> (Published)

Answer Ranking for Product-Related Questions via Multiple Semantic Modeling, by ZHANG, Wenxuan; DENG, Yang; LAM, Wai. (2020). *Proceedings of the 43rd International ACM SIGIR conference on research and development in Information Retrieval, SIGIR 2020*, Virtual Event, China, July 25-30, 2020, (pp. 569-578) USA: ACM. <https://doi.org/10.1145/3397271.3401166> (Published)

Bridging Hierarchical and Sequential Context Modeling for Question-driven Extractive Answer Summarization, by DENG, Yang; ZHANG, Wenxuan; LI, Yaliang; YANG, Min; LAM, Wai; SHEN, Ying. (2020). *Proceedings of the 43rd*

International ACM SIGIR conference on research and development in Information Retrieval, SIGIR 2020, Virtual Event, China, July 25-30, 2020, (pp. 1693-1696) USA: ACM. <https://doi.org/10.1145/3397271.3401208> (Published)

Review-guided Helpful Answer Identification in E-commerce, by ZHANG, Wenxuan; LAM, Wai; DENG, Yang; MA, Jing. (2020). *Proceedings of the Web Conference 2020*, Taipei, Taiwan, April 20-24, 2020, (pp. 2620-2626) USA: ACM/IW3C2. <https://doi.org/10.1145/3366423.3380015> (Published)

Multi-Task Learning with Multi-View Attention for Answer Selection and Knowledge Base Question Answering, by DENG, Yang; XIE, Yuexiang; LI, Yaliang; YANG, Min; DU, Nan; FAN, Wei; LEI, Kai; SHEN, Ying. (2019). *Proceedings of the Thirty-Third AAAI Conference on Artificial Intelligence, AAAI 2019*, Honolulu, Hawaii, USA, January 27 - February 1, 2019, (pp. 6318-6325) USA: AAAI Press. <https://doi.org/10.1609/aaai.v33i01.33016318> (Published)

MedTruth: A Semi-supervised Approach to Discovering Knowledge Condition Information from Multi-Source Medical Data, by DENG, Yang; LI, Yaliang; SHEN, Ying; DU, Nan; FAN, Wei; YANG, Min; LEI, Kai. (2019). *Proceedings of the 28th ACM International Conference on Information and Knowledge Management*, Beijing, China, November 3-7, 2019, (pp. 719-728) USA: ACM. <https://doi.org/10.1145/3357384.3357934> (Published)

Knowledge-aware Attentive Neural Network for Ranking Question Answer Pairs, by SHEN, Ying; DENG, Yang; YANG, Min; LI, Yaliang; DU, Nan; FAN, Wei; LEI, Kai. (2018). *Proceedings of the 41st International ACM SIGIR conference on research and development in Information Retrieval, SIGIR 2018*, Ann Arbor, MI, USA, July 08-12, 2018, (pp. 901-904) USA: ACM. <https://doi.org/10.1145/3209978.3210081> (Published)

Knowledge as A Bridge: Improving Cross-domain Answer Selection with External Knowledge, by DENG, Yang; SHEN, Ying; YANG, Min; LI, Yaliang; DU, Nan; FAN, Wei; LEI, Kai. (2018). *Proceedings of the 27th International Conference on Computational Linguistics, COLING 2018*, Santa Fe, New Mexico, USA, August 20-26, 2018, (pp. 3295-3305) USA: Association for Computational Linguistics. <https://aclanthology.org/C18-1279/> (Published)