

Yuyan Chen

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EDUCATION

Ph.D. in Computer Science	Fudan University, Shanghai, China	Sep.2021 - Jul.2025
M.S. in Medicine	Sun Yat-sen University, Guangzhou, China	Sep.2018 - Jul.2021
B.S. in Medicine	Zhengzhou University, Zhengzhou, China	Sep.2013 - Jul.2018

RESEARCH INTERESTS

Large Language Models, Multimodal Large Models, Natural Language Processing, Question-Answering Systems, Dialogue Systems, Knowledge Graphs, Emotion Computing, AI-based Interdisciplinary research.

PUBLICATIONS

A total of 34 papers have been submitted, including 22 as the first author, with 15 already published. Among the published papers, 13 are first-author papers, including 8 in CCF-Rank A and 5 in CCF-Rank B conferences.

A. Understanding, Explanation, Reasoning, and High-Quality Answering with Language Models

A.1. Understanding Users' Questions, Providing Explanations, and Reasoning Based on Existing Context

- 2023 **Yuyan Chen**, Yanghua Xiao*, Bang Liu*, Zhixu Li*. XMQAs: Constructing Complex-Modified Question-Answering Dataset for Robust Question Understanding. (**Accepted** to TKDE 2023, CCF-Rank A).
- 2024 **Yuyan Chen**, Chenwei Wu, Songzhou Yan, Panjun Liu, Haoyu Zhou, Yanghua Xiao*. Dr. Academy: A Benchmark for Evaluating Questioning Capabilities in Education for Large Language Models. (**Accepted** to ACL 2024, CCF-Rank A).
- 2024 **Yuyan Chen**, Jiyuan Jia, Yibo Xu, Jingwen Chang, Qingpei Guo*, Ming Yang, Yanghua Xiao*. VideoAgent: Enhancing Complex Video Question-Answering for Large Multimodal Models. (Under review in AAAI 2024, CCF-Rank A).
- 2024 **Yuyan Chen**, Jiaheng Wang, Yichen Yuan, Panjun Liu, Yanghua Xiao*. Do Large Language Models have Lateral Thinking in Puzzle-Solving Games? (Under review in NIPS 2024, CCF-Rank A).
- 2024 **Yuyan Chen**, Tianhao Yu, Yueze Li, Songzhou Yan, Sijia Liu, Jiaqing Liang, Yanghua Xiao*. Do Large Language Models have Problem-Solving Capability under Incomplete Information Scenarios? (**Accepted** to ACL 2024, CCF-Rank A).
- 2024 Zhihong Zhu, Xuxin Cheng, Zhaorun Chen, **Yuyan Chen**, Yunyan Zhang, Xian Wu, Yefeng Zheng, Bowen Xing*. InMu-Net: Advancing Multi-modal Intent Detection via Information Bottleneck and Multi-sensory Processing. (**Accepted** to MM 2024, CCF-Rank A).

- 2022 **Yuyan Chen**, Yanghua Xiao*, Bang Liu. Grow-and-Clip: Informative-yet-Concise Evidence Distillation for Answer Explanation. (**Accepted** to ICDE 2022, CCF-Rank A).
- 2024 **Yuyan Chen**, Zehao Li, Zhengyu Chen, Jingwen Chang, Yanghua Xiao*. Attributive Reasoning for Hallucination Diagnosis of Large Language Models. (Under review in AAAI 2024, CCF-Rank A).

A.2. High-Quality Answers: Providing the Best, Most Relevant, and Most Reliable Answers for Users

- 2021 Haitian Yang*, Weiging Huang*, Xuan Zhao, Yan Wang*, **Yuyan Chen**, Bin Lv, Rui Mao, Ning Li. AMQAN: Adaptive Multi-Attention Question-Answer Networks for Answer Selection. (**Accepted** to ECML-PKDD 2021, CCF-Rank B).
- 2024 Chang Zong, **Yuyan Chen**, Yueting Zhuang*. ProSwitch: Fine-Tuning Large Language Models to Generate Professional and Non-Professional Styled Text. (Under review in COLING 2024, CCF-Rank B).
- 2024 Yinghui Xia, **Yuyan Chen**, TIANYU SHI, Jun Wang, Yang Jingsong. CoderGen: Towards Domain-Specific Code Generation of Large Language Models. (Under review in NIPS 2024).
- 2024 **Yuyan Chen**, Qingpei Guo*, Shuangjie You, Zhixu Li*. MedTransTab: Advancing Medical Cross-Table Prediction and Generation. (Under review in WSDM 2024, CCF-Rank B).
- 2024 **Yuyan Chen**, Jin Zhao, Zhihao Wen, Zhixu Li*, Yanghua Xiao*. TemporalMed: Advancing Medical Dialogues with Time-Aware Responses in Large Language Models. (**Accepted** to WSDM 2024, CCF-Rank B, THU-Rank A).
- 2024 Jinzhi Wang, **Yuyan Chen**, Qinke Peng, Li Haozhou, Zeyuan ZENG, Wentong Sun, Defu Li, Beini Tang. ElectriQ: A Benchmark for Assessing the Response Capability of Large Language Models in Power Marketing. (Under review in NIPS 2024).
- 2023 **Yuyan Chen**, Qiang Fu*, Yichen Yuan, Zhihao Wen, Ge Fan, Dayiheng Liu, Dongmei Zhang, Zhixu Li*, Yanghua Xiao*. Hallucination Detection: Discerning Reliable Responses in Large Language Models. (**Accepted** to CIKM 2023, CCF-Rank B).

A.3. Others

- 2024 Chengmei Yang, Bowei He, **Yuyan Chen**, Lianghua He, Chen Ma*. Relation-Guided Cascading Generation for Low-Shot Relational Triplet Extraction. (Under review in TASLP 2024, CCF-Rank B).
- 2024 Bo Li, **Yuyan Chen**, Liang Zeng*. KENET: Knowledge-Enhanced Doc-Label Attention Network for Multi-Label Text Classification. (**Accepted** to ICASSP 2024, CCF-Rank B).
- 2021 **Yuyan Chen**, Zelong Liu, Yunxian Mo, Bin Li, Qian Zhou, Sui Peng, Shaoqiang Li*, Ming Kuang*. Prediction of post-hepatectomy liver failure in patients with hepatocellular carcinoma based on radiomics using Gd-EOB-DTPA-enhanced MRI:the liver failure model. (**Accepted** to Frontiers in Oncology 2021, IF=6.03).

B. Emotion Cognition and Understanding with Language Models

B.1. Emotional Intelligence and Empathy

- 2024 **Yuyan Chen**, Yanghua Xiao*. Recent Advancement of Emotion Cognition in Large Language Models. (Under Review EMNLP 2024, CCF-Rank B).
- 2024 **Yuyan Chen**, Hao Wang, Songzhou Yan, Sijia Liu, Yueze Li, Yi Zhao, Yanghua Xiao*. EmotionQueen: A Benchmark for Evaluating Empathy of Large Language Models. (**Accepted** to ACL 2024, CCF-Rank A).
- 2024 **Yuyan Chen**, Yichen Yuan, Panjun Liu, Zhengyu Chen, Yanghua Xiao*. Phone Down, Start Revising: Infusing High-Context Empathy into Large Language Models in Conversations. (Under review in AAAI 2024, CCF-Rank A).

- 2024 **Yuyan Chen**, Jiyuan Jia, Jingwen Chang, Yanghua Xiao*. SpeakSmart: Evaluating Empathetic Goal-Oriented Responses by Large Language Models. (Under review in AAAI 2024, CCF-Rank A).
- 2024 **Yuyan Chen**, Qingpei Guo*, Shuangjie You, Yan Zan, Zhixu Li*. Constructing Commonsense Knowledge Graph for Persona Consistency. (Under Review in WSDM 2024, CCF-Rank B).

B.2. Understanding and Generating Humor

- 2023 **Yuyan Chen**, Zhixu Li*, Jiaqing Liang, Yanghua Xiao*, Bang Liu*, Yunwen Chen. Can Pre-trained Language Models understand Chinese humor? (**Accepted** to WSDM 2023, CCF-Rank B, THU-Rank A).
- 2024 Zhihong Zhu, Zhaorun Chen, Yunyan Zhang, Xiaoqi Jiao, **Yuyan Chen**, Zhiq Huang, Bowen Xing, Xian Wu, Yefeng Zheng. DGLF: A Dual Graph-based Learning Framework for Multi-modal Sarcasm Detection. (Under review in EMNLP 2024, CCF-Rank B).
- 2024 **Yuyan Chen**, Yichen Yuan, Panjun Liu, Dayiheng Liu, Qinghao Guan, Mengfei Guo, Haiming Peng, Zhixu Li*, Yanghua Xiao* and Bang Liu*. Talk Funny! A Large-scale Humor Response Dataset with Chain-of-Humor Interpretation. (**Accepted** to AAAI 2024, CCF-Rank A).
- 2024 **Yuyan Chen**, Songzhou Yan. Zhixu Li*, Yanghua Xiao*. XMeCap: Meme Caption Generation with Sub-Image Adaptability. (**Accepted** to MM 2024. CCF-Rank A).
- 2024 **Yuyan Chen**, Yiwen Qian, Songzhou Yan, Jiyuan Jia, Zhixu Li, Yanghua Xiao, Xiaobo Li, Aaron Xuxiang Tian, Ming Yang, Qingpei Guo*. HOTVCOM: Generating Buzzworthy Comments for Videos. (**Accepted** to ACL 2024, CCF-Rank A).
- 2024 **Yuyan Chen**, Yifan Jiang, Li Zhou, shuangjie you, Jingwen Chang, Yi Zhang, Yanghua Xiao, Yu Guan, Ming Yang, Qingpei Guo*. CharmNet: Generating Appealing Descriptions for Real-World Images. (Under review in AAAI 2024, CCF-Rank A).

C. Training Optimization of Language Models: More Efficient and Accurate Training

- 2023 **Yuyan Chen**, Qiang Fu*, Ge Fan, Lun Du, Jian-Guang Lou, Shi Han, Zhixu Li*, Yanghua Xiao*, Dongmei Zhang. Hadamard Adapter: An Extreme Parameter-Efficient Adapter Tuning Method for Pre-trained Language Models. (**Accepted** to CIKM 2023, CCF-Rank B).
- 2023 **Yuyan Chen**, Zhihao Wen, Ge Fan, Zhengyu Chen, Wei Wu*, Dayiheng Liu, Zhixu Li, Bang Liu, Yanghua Xiao*. MAPO: Boosting Large Language Model Performance with Model-Adaptive Prompt Optimization. **Accepted** to EMNLP 2023, CCF-Rank B, THU-Rank A).
- 2024 Yi Zhang, Chun-Wun Cheng, Angelica I Aviles-Rivero, Junyi He, Carola-Bibiane Schönlieb, **Yuyan Chen**, Kc Yu, Zhihai He. QuAdapter: Quaternion Adapters for Vision-Language Models in Video Class Incremental Learning. (Under review in AAAI 2024, CCF-Rank A).
- 2024 Yi Zhang, Chun-Wun Cheng, Angelica I Aviles-Rivero, Junyi He, Carola-Bibiane Schönlieb, **Yuyan Chen**, Yushun Tang, Zhihai He. Training-Free Test-Time Adaptation with Brownian Distance Covariance in Vision-Language Models. (Under review in AAAI 2024, CCF-Rank A).
- 2024 Yi Zhang, Chun-Wun Cheng, Junyi He, Zhihai He, Carola-Bibiane Schönlieb, **Yuyan Chen**, Angelica I Aviles-Rivero. Cross-Modal Few-Shot Learning with Second-Order Neural Ordinary Differential Equations. (Under review in AAAI 2024, CCF-Rank A).

SELECTED PATENTS

A total of 48 national patents are applied (including 40 as the first inventor), with 30 granted.

- 2024 **Yuyan Chen**, Yueze Li, Jiaqing Liang, Yanghua Xiao. Evaluation Device for Problem-Solving Capabilities under Incomplete Information for Large Language Models. ZL202410780036.X.

- 2024 **Yuyan Chen**, Yueze Li, Jiaqing Liang, Yanghua Xiao. Evaluation Device for Questioning Capabilities in Education for Large Language Models. ZL202410780038.9.
- 2024 **Yuyan Chen**, Yueze Li, Jiaqing Liang, Yanghua Xiao. Evaluation Device for Emotional Cognition Capabilities of Large Language Models. ZL202410780037.4.
- 2024 **Yuyan Chen**, Tinghao Shi, Zhixu Li, Yanghua Xiao. Method and Device for Generating Popular Comments on Videos for Multimodal Applications. ZL202410088250.9.
- 2024 Qingpei Guo, **Yuyan Chen**, Ming Yang. Video Question-Answering Method, System, Task Parsing Method, and Model Training Method. ZL202410922451.4.
- 2023 **Yuyan Chen**, Zhixu Li, Yanghua Xiao, Ge Fan. Parameter-Efficient Adapter Tuning Method for Fine-Tuning Pre-trained Language Models. ZL202310400899.5.
- 2023 **Yuyan Chen**, Zhixu Li, Yanghua Xiao, Fang Guo. Persona Knowledge Graph, Persona Dialogue Dataset, and Persona Consistency Method. ZL202310348845.9.
- 2023 **Yuyan Chen**, Zhixu Li, Jiaqing Liang, Yanghua Xiao. Method for Exploring Humor Understanding Capabilities of Pre-trained Language Models. ZL202310098163.7.
- 2023 **Yuyan Chen**, Yanghua Xiao, Zhixu Li. Knowledge-Enhanced Document-Label Attention Method for Multi-Label Text Classification. ZL202310090342.6.
- 2023 **Yuyan Chen**, Zhixu Li, Jiaqing Liang, Yanghua Xiao, Fang Guo. Adaptive Prompt Enhancement Method for Large-Scale Language Models. ZL202311195451.0.
- 2023 **Yuyan Chen**, Zhixu Li, Jiaqing Liang, Yanghua Xiao, Fang Guo. Reliability Detection Method for Answers Generated by Large-Scale Language Models. ZL202311195452.5.
- 2023 **Yuyan Chen**, Zhixu Li, Jiaqing Liang, Yanghua Xiao, Fang Guo. The Method to Enhance the Humorous Response Ability of Pre-trained Language Models for Advanced Machine Cognition. ZL202311195450.6.
- 2023 **Yuyan Chen**, Yanghua Xiao, Zhixu Li. High-Context Empathy Enhancement Response Generation Method and Device for Large Language Models. ZL202311856151.2.
- 2023 **Yuyan Chen**, Yanghua Xiao, Zhixu Li. Solution Generation Method and Device for Nonlinear Reasoning Tasks. ZL202311856150.8.
- 2023 **Yuyan Chen**, Yanghua Xiao, Zhixu Li. Meme Caption Generation Method and Device with Adaptability to Sub-Image Quantities. ZL202311856147.6.
- 2023 **Yuyan Chen**, Yanghua Xiao, Tinghao Shi, Zhixu Li. Time-Aware Response Generation Method and Device for Medical Dialogues. ZL202311856149.5.
- 2023 **Yuyan Chen**, Yanghua Xiao, Zhixu Li. Cross-Table Data Generation Method for the Medical Field. ZL202311856146.1.
- 2022 **Yuyan Chen**, Zhixu Li, Cong Zhang, Jiaqing Liang, Yanghua Xiao. Method for Enhancing Humor Response Capability of Pre-trained Language Models for Higher-Order Machine Cognition. ZL202211239666.3.

GRANTS AND AWARDS

Including 2 international awards, 13 national awards, 6 provincial or municipal awards, 17 university-level awards (all as the first participant)

Apr.2024 Campus Academic Star

Sep.2023 Campus Entrepreneurship Star

Oct.2022 Honorable Mention, Mathematical Contest in Modeling (MCM)

Sep.2020	National First Prize, National College English Competition
Jun.2020	Outstanding Graduate
Jun.2020	Third place, CCF Big Data and Computing Intelligence Competition: Intelligent personalized package matching model for telecom industry stock users
Sep.2019	Third place, iFLYTEK AI Marketing Algorithm Competition: Predicting users' ad click-through rate,
Sep.2018	National Second Prize, National College Student Intelligent Technology Application Competition: CANWALK - A Rehabilitation Trainer for Hemiplegic Patients

PEER REVIEW

3 papers	ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) 2024, CCF-Rank A
4 papers	Annual Meeting of the Association for Computational Linguistics (ACL) 2024, CCF-Rank A
5 papers	Conference on Empirical Methods in Natural Language Processing (EMNLP) 2024, CCF-Rank B
2 papers	Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL) 2022, CCF-Rank B
5 papers	International Conference on Computational Linguistics (COLING) 2025, CCF-Rank B
1 paper	ACM Computing Surveys, Impact Factor 23.8

INTERNSHIP EXPERIENCE

Microsoft Research Asia, DKI Group, Research Intern	Jul.2022 - Apr.2023
Lightweight training of language models; hallucination detection in large language models.	

Alibaba and Ant Group, Multimodal Group, Research Intern	May.2023 - Nov.2023
Generating video comments using OCR and ASR information from short videos to create comments that align better with human preferences; complex video question-answering using agents with multimodal large models.	

ByteDance, E-commerce, Business Intern	Dec.2023 - Apr.2024
Pretraining multimodal large models to enhance question-answering capabilities in the E-commerce field.	

Tencent, WeChat, Business Intern	May.2024 - Aug.2024
Detecting sensitive political figures using active learning with large language models.	