Yanyuan Qiao

Personal Website · Google Scholar · Email

Bio

Yanyuan Qiao is a postdoctoral research fellow at the Australian Institute for Machine Learning (AIML), The University of Adelaide. She has been working on multi-modal learning tasks, such as Vision-and-Language Navigation, Text-to-Image Synthesis, and Visual Question Answering, and has published 18 peer-reviewed papers in top journals and conferences such as TPAMI, CVPR, ICCV, ECCV, and ACM MM. Currently, she is focusing on the research of multimodal learning and Embodied AI.

Research Interest

Embodied AI, Multimodal Learning.

Work Experience

Australian Institute For Machine Learning, Adelaide, Australia   *Jan. 2024 – Present*
Postdoctoral Research Fellow

Education

The University of Adelaide, Adelaide, Australia   *Sep. 2020 – Dec. 2023*
PhD in Computer Science

University of Chinese Academy of Sciences, Beijing, China   *Sep. 2016 – Jun. 2019*
MEng in Electronics and Communication Engineering

Southeast University, Nanjing, China   *Aug. 2012 – Jun. 2016*
BEng in Sensor Network Technology

Publications

Journals

- Siqi Zhang, **Yanyuan Qiao**, Qunbo Wang, Longteng Guo, Zhihua Wei, Jing Liu. FlexVLN: Flexible Adaptation for Diverse Vision-and-Language Navigation Tasks. *IEEE Transactions on Multimedia (TMM)*, 2025.
- Yue Zhang*, Ziqiao Ma*, Jialu Li*, **Yanyuan Qiao***, Zun Wang*, Joyce Chai, Qi Wu, Mohit Bansal, Parisa Kordjamshidi. Vision-and-Language Navigation Today and Tomorrow: A Survey in the Era of Foundation Models. *Transactions on Machine Learning Research (TMLR)*, 2024.
- **Yanyuan Qiao**, Yuankai Qi, Yicong Hong, Zheng Yu, Peng Wang, Qi Wu. HOP+: History-enhanced and Order-aware Pre-training for Vision-and-Language Navigation. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2023.
- **Yanyuan Qiao**, Chaorui Deng, Qi Wu. Referring Expression Comprehension: A Survey of Methods and Datasets. *IEEE Transactions on Multimedia (TMM)*, 2020.
- Zhiwei Fang, Jing Liu, Yong Li, **Yanyuan Qiao**, Hanqing Lu. Improving Visual Question Answering Using Dropout and Enhanced Question Encoder. *Pattern Recognition (PR)*, 2019.

Conferences

- Qianyi Liu, Siqi Zhang, **Yanyuan Qiao**, Junyou Zhu, Xiang Li, Longteng Guo, Qunbo Wang, Xingjian He, Qi Wu, Jing Liu. GroundingMate: Aiding Object Grounding for Goal-Oriented Vision-and-Language Navigation. *Winter Conference on Applications of Computer Vision (WACV)*, 2025

- **Yanyuan Qiao**, Qianyi Liu, Jiajun Liu, Jing Liu, Qi Wu. LLM as Copilot for Coarse-grained Vision-and-Language Navigation. *European Conference on Computer Vision (ECCV)*, 2024.
- Mingzhen Sun, Weining Wang, **Yanyuan Qiao**, Jiahui Sun, Zihan Qin, Longteng Guo, Xinxin Zhu, Jing Liu. MM-LDM: Multi-Modal Latent Diffusion Model for Sounding Video Generation. *ACM Multimedia Conference (ACMMM)*, 2024.
- **Yanyuan Qiao**, Yuankai Qi, Zheng Yu, Jing Liu, Qi Wu. March in Chat: Interactive Prompting for Remote Embodied Referring Expression. *International Conference on Computer Vision (ICCV)*, 2023.
- **Yanyuan Qiao**, Zheng Yu, Qi Wu. VLN-PETL: Parameter-Efficient Transfer Learning for Vision-and-Language Navigation. *International Conference on Computer Vision (ICCV)*, 2023.
- **Yanyuan Qiao**, Yuankai Qi, Yicong Hong, Zheng Yu, Peng Wang, Qi Wu. HOP: History-and-Order Aware Pre-training for Vision-and-Language Navigation. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022.
- **Yanyuan Qiao**, Qi Chen, Chaorui Deng, Ning Ding, Yuankai Qi, Mingkui Tan, Xincheng Ren, Qi Wu. R-GAN: Exploring Human-like Way for Reasonable Text-to-Image Synthesis via Generative Adversarial Networks. *ACM International Conference on Multimedia (ACM MM)*, 2021.
- **Yanyuan Qiao**, Zheng Yu, Jing Liu. RANKVQA: Answer Re-ranking for Visual Question Answering. *IEEE International Conference on Multimedia and Expo (ICME)*, 2020. (**Oral**)
- **Yanyuan Qiao**, Zheng Yu, Jing Liu. VC-VQA: Visual calibration mechanism for Visual Question Answering. *IEEE International Conference on Image Processing (ICIP)*, 2020.
- Zhiwei Fang, Jing Liu, **Yanyuan Qiao**, Qu Tang, Yong Li, Hanqing Lu. Enhancing Visual Question Answering Using Dropout. *ACM International Conference on Multimedia (ACM MM)*, 2018.

Workshops

- **Yanyuan Qiao**, Zheng Yu, Zijia Zhao, Sihan Chen, Mingzhen Sun, Longteng Guo, Qi Wu, Jing Liu. VL-Mamba: Exploring State Space Models for Multimodal Learning. *NeurIPS Workshop on Efficient Natural Language and Speech Processing*, 2024.
- Xiangyu Shi, **Yanyuan Qiao**, Qi Wu, Lingqiao Liu, Feras Dayoub. Improving Online Source-free Domain Adaptation for Object Detection by Unsupervised Data Acquisition. *ECCV Workshop on ROAM*, 2024.
- Zheng Yu, **Yanyuan Qiao**, Yutong Xie, Qi Wu. Multi-Modal Adapter for Medical Vision-and-Language Learning. *International Workshop on Machine Learning in Medical Imaging (MLMI@MICCAI)*, 2023.

Preprints

- **Yanyuan Qiao**, Wenqi Lyu, Hui Wang, Zixu Wang, Zerui Li, Yuan Zhang, Mingkui Tan, Qi Wu. Open-Nav: Exploring Zero-Shot Vision-and-Language Navigation in Continuous Environment with Open-Source LLMs. *Submitted to ICRA*, 2024.
- Junyou Zhu, **Yanyuan Qiao**, Siqi Zhang, Xingjian He, Qi Wu, Jing Liu. MiniVLN: Efficient Vision-and-Language Navigation by Progressive Knowledge Distillation. *Submitted to ICRA*, 2024.
- Wenbo Zhang, Yang Li, **Yanyuan Qiao**, Siyuan Huang, Jiajun Liu, Feras Dayoub, Xiao Ma, Lingqiao Liu. Effective Tuning Strategies for Generalist Robot Manipulation Policies. *Submitted to ICRA*, 2024.
- Zerui Li, Gengze Zhou, Haodong Hong, Yanyan Shao, Wenqi Lyu, **Yanyuan Qiao**, Qi Wu. Ground-level Viewpoint Vision-and-Language Navigation in Continuous Environments. *Submitted to ICRA*, 2024.

Honors and Awards

Honors & Scholarship:

- ICCV Doctoral Consortium — 2023
- Dean's Commendation for Doctoral Thesis Excellence — 2023
- Ecoles d'été France Excellence Scholarship — 2018
- University of Chinese Academy of Sciences 2016-2017 Outstanding Student — 2017
- University of Chinese Academy of Sciences Academic Scholarship — 2016
- Southeast University 2014-2015 Course Scholarship — 2015

Awards & Prizes:

- 3rd place in the Large-Scale Robot and Embodied AI Challenge at the 2023 CCF ChinaSoft Cup   2023
- 4th place in the VQA Challenge at CVPR Workshop 2018   2018

TEACHING

Guest Lecture   *2024 Semester 2*
Course: Applied Machine Learning: AI in Robotics
School of Computer and Mathematical Sciences, University of Adelaide

Teaching Assistant   *2024 Trimester 2&3*
Course: Artificial Intelligence and Machine Learning Research Project
School of Computer and Mathematical Sciences, University of Adelaide

TALKS

"Exploring Vision-and-Language Navigation in the Era of Foundation Models."
- Shanghai Jiao Tong University, Online   Dec. 2024

"Advancing Embodied Vision-and-Language Navigation in the Era of Foundation Models."
- Monash University   Nov. 2024

AI & Data Science Panel
- University of Adelaide   Sep. 2024

"Vision-and-Language Navigation."
- AIML Research Showcase, National Wine Centre of Australia (NWC)   Aug. 2023

"General Vision and Language Methods in Real Applications: A Focus on Vision-and-Language Navigation."
- QingYuan Talk, Online   Aug. 2023
- AIML, Atrium   July. 2023

ADVISING & MENTORSHIP

Co-Advisor
- Zerui Li, *Mphil* at University of Adelaide   2024 - Present
- Jian Zhou, *Mphil* at University of Adelaide   2024 - Present

Research Mentor
- Siqi Zhang, *PhD* at Tongji University   2023 - Present
- Mingzhen Sun, *PhD* at University of Chinese Academy of Sciences   2023 - Present
- Xiangyu Shi, *Mphil* at University of Adelaide   2023 - Present
- Qianyi Liu, *Mphil* at University of Chinese Academy of Sciences   2023 - Present
- Junyou Zhu, *Mphil* at University of Chinese Academy of Sciences   2023 - Present
- Wenqi Lyu, *Msc* at University of Adelaide   2024 - Present

PROFESSIONAL ACTIVITIES

- Journal Reviewer: IJCV, TCSVT, TOMM, Neurocomputing
- Conference Reviewer: ICLR 2025, ICML 2025, CVPR 2024/2025, ECCV 2024, NeurIPS 2024, ACM MM 2024, AAAI 2024, ICRA 2024, BMVC 2021/2023/2024, WACV 2024.