Bo Miao

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RESEARCH INTERESTS

o **Computer Vision, Video Understanding, Segmentation, Vision-and-Language, Human-centered AI**

EDUCATION

PhD in Computer Science, University of Western Australia (Main Supervisor: Prof. Ajmal Mian) 2021-2025

MSc in EE (Signal and Information Processing), University of Jinan 2015-2018

BSc in EE (Communication Engineering), University of Jinan 2011-2015

EMPLOYMENT

Research Assistant | The Chinese University of Hong Kong, Shenzhen | China May 2020 – Dec 2020
o Conducted research on robot vision, including robot indoor navigation (first author paper published at the IROS conference) and video anomaly detection.

Machine Learning Engineer | SINA Weibo (the Twitter of China) | China Jul 2018 – Sep 2019
o Developed a machine learning-based recommendation system and leveraged data mining techniques to identify high-quality blog posts.
o Developed a data analysis and monitoring system to track key metrics and improve stability.

SELECTED PUBLICATIONS

Conference:

o Referring Human Pose and Mask Estimation In the Wild
Bo Miao, M. Feng, Z. Wu, M. Bennamoun, Y. Gao, A. Mian
Advances in Neural Information Processing Systems (**NeurIPS**), 2024.

o External knowledge enhanced 3d scene generation from sketch
Z. Wu, M. Feng, Y. Wang, H. Xie, W. Dong, **Bo Miao**, A. Mian
European Conference on Computer Vision (**ECCV**), 2024.

o Spectrum-guided Multi-granularity Referring Video Object Segmentation
Bo Miao, M. Bennamoun, Y. Gao, A. Mian
International Conference on Computer Vision (**ICCV**), 2023.

o Regional Video Object Segmentation by Efficient Motion-Aware Mask Propagation
Bo Miao, M. Bennamoun, Y. Gao, A. Mian
International Conference on Digital Image Computing: Techniques and Applications (**DICTA**), 2023.

o Self-Supervised Video Object Segmentation by Motion-Aware Mask Propagation
Bo Miao, M. Bennamoun, Y. Gao, A. Mian
IEEE International Conference on Multimedia and Expo (**ICME**), 2022. (**Oral**)

o Object-to-Scene: Learning to Transfer Object Knowledge to Indoor Scene Recognition
Bo Miao, L. Zhou, A. Mian, T. L. Lam, Y. Xu
IEEE/RSJ International Conference on Intelligent Robots and Systems (**IROS**), 2021.

o Automated epileptic seizure detection method based on the multi-attribute EEG feature pool and mRMR feature selection method
Bo Miao, J. Guan, L. Zhang, Q. Meng, Y. Zhang
International Conference on Computational Science (**ICCS**), 2019. (**Oral**)

o A Feature Selection Method for Classification of ADHD
Bo Miao, Y. Zhang
International conference on information, cybernetics and … (**ICCSS**), 2017. (**Best Paper**)

Journal:

o Region Aware Video Object Segmentation with Deep Motion Modeling
Bo Miao, M. Bennamoun, Y. Gao, A. Mian
IEEE Transactions on Image Processing (**TIP**), 2024.

o Temporally Consistent Referring Video Object Segmentation with Hybrid Memory
Bo Miao, M. Bennamoun, Y. Gao, M. Shah, A. Mian
IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT**), 2024.

o Context-Enhanced Video Moment Retrieval with Large Language Models
W. Liu, **Bo Miao**, J. Cao, X. Zhu, B. Liu, M. Nasim, A. Mian
Minor revision in *IEEE Transactions on Multimedia* (**TMM**), 2024.

- o Classification of ADHD individuals and neurotypicals using reliable RELIEF: A resting-state study
  Bo Miao, L. Zhang, J. Guan, Q. Meng, Y. Zhang
  IEEE Access, 2019.

PROFESSIONAL ACTIVITIES

Conference Reviewer: NeurIPS, ICLR, CVPR, ICCV, ECCV, AAAI, IROS, ACCV, DICTA, etc.

Journal Reviewer: TPAMI, IJCV, TIP, Neurocomputing, etc.

Session Co-chair of IROS 2021 "Recognition"

AWARDS

ARC-Funded PhD Full Scholarship

ICCSS Best Paper Finalist

UWA CSSE HDR Conference Excellent Presentation Award

Third Place in the 5th LSVOS International Challenge (R-VOS Track) at ICCV2023

ROFESSIONAL SKILLS

Coding: PyTorch, Python, C++, Java, Matlab, Latex, Shell

Languages: Mandarin (native), English

- o Classification of ADHD individuals and neurotypicals using reliable RELIEF: A resting-state study
  Bo Miao, L. Zhang, J. Guan, Q. Meng, Y. Zhang
  IEEE Access, 2019.

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