WEIXIN LUO

Chaoyang District, Beijing, China

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EDUCATION

University of Chinese Academy of Sciences, China *September 2015 - July 2020*
Affiliated with ShanghaiTech University, Shanghai
Ph.D. in Computer Science
Mentor: Shenghua Gao

University of California, Davis *November 2018 - May 2019*
Visiting Scholar
Mentor: Yong Jae Lee

Shenzhen University, China *September 2011 - June 2015*
Hornor Bachelor in Computer Science
Mentor: Meng Yang

WORK EXPERIENCE

Vision Intelligence Center, Meituan **Beijing, China**

- Research Scientist *November 2020 - Now*

PROJECT

Intelligent Warehouse *January 2021 - Now*

Task: to develop an intelligent system with analysis of humans, vehicles, and commodities in warehouses.

Role: Tech Leader.

Vision GPT *May 2023 - Now*

Task: to develop a Large Language Model (GPT/LLAMA/CHAT-GLM) to invoke multiple vision tasks.

Role: Tech Leader.

RESEARCH INTEREST

Action recognition/detection/segmentation/verification.

2D/3D object detection.

Multi-modalities in image/video/point clouds.

SELECTED PUBLICATIONS

Publications 30+, Google Scholar Citation 3700+.

Feng Yan, **Weixin Luo**, Yujie Zhong, Yiyang Gan, Lin Ma, Bridging the Gap Between End-to-end and Non-End-to-end Multi-Object Tracking. arXiv 2023

Anthony Cioppa, Silvio Giancola, Vladimir Somers, Floriane Magera, Xin Zhou, Hassan Mkhallati, Adrien Deliege, Jan Held, Carlos Hinojosa, Amir M Mansourian, Pierre Miralles, Olivier Barnich, Christophe De Vleeschouwer, Alexandre Alahi, Bernard Ghanem, Marc Van Droogenbroeck, Abdullah Kamal, Adrien Maglo, Albert Claps, Amr Abdelaziz, Artur Xarles, Astrid Orcesi, Atom Scott, Bin Liu, Byoungkwon Lim, Chen Chen, Fabian Deuser, Feng Yan, Fufu Yu, Gal Shitrit, Guanshuo Wang, Gyusik Choi, Hankyul Kim, Hao Guo, Hasby Fahrudin, Hidenari Koguchi, Hkan Ard, Ibrahim Salah, Ido Yerushalmy, Iftikar Muhammad, Ikuma Uchida, Ishay Be'ery, Jaonary Rabarisoa, Jeongae Lee, Jiajun Fu, Jianqin Yin, Jinghang Xu, Jongho Nang, Julien Denize, Junjie Li, Junpei Zhang, Juntae Kim, Kamil Synowiec, Kenji Kobayashi, Kexin Zhang, Konrad Habel, Kota Nakajima, Licheng Jiao, Lin Ma, Lizhi Wang, Luping Wang, Menglong Li, Mengying Zhou, Mohamed Nasr, Mohamed Abdelwahed, Mykola Liashuha, Nikolay Falaleev, Norbert Oswald, Qiong Jia, Quoc-Cuong Pham, Ran Song, Romain Hrault, Rui Peng, Ruilong Chen, Ruixuan Liu, Ruslan Baikulov, Ryuto Fukushima, Sergio Escalera, Seungcheon Lee, Shimin Chen, Shouhong Ding, Taiga Someya, Thomas B Moeslund, Tianjiao Li, Wei Shen, Wei Zhang, Wei Li, Wei Dai, **Weixin Luo**, Wending Zhao, Wenjie Zhang, Xinquan Yang, Yanbiao Ma, Yeeun Joo, Yingsen Zeng, Yiyang Gan, Yongqiang Zhu, Yujie Zhong, Zheng Ruan, Zhiheng Li, Zhijian Huang, Ziyu Meng. SoccerNet 2023 Challenges Results. arXiv 2023

Shuqiang Cao, **Weixin Luo**, Bairui Wang, Wei Zhang, Lin Ma, A Circular Window-based Cascade Transformer for Online Action Detection. arXiv 2022

Jiaming Chen, **Weixin Luo**, Wei Zhang, Lin Ma, HAM: Hierarchical Attention Model with High Performance for 3D Visual Grounding. arXiv 2022

Feng Yan, Zhiheng Li, **Weixin Luo**, Fan Liang, Xiaolin Wei, Lin Ma. Multiple Object Tracking Challenge Technical Report for Team MT_IoT. (Technical Report) arXiv 2022

Shuqiang Cao, **Weixin Luo**, Bairui Wang, Wei Zhang, Lin Ma, E2E-LOAD: End-to-End Long-form Online Action Detection. ICCV 2023

Sixun Dong, Huazhang Hu, Dongze Lian, **Weixin Luo**, Yicheng Qian, Shenghua Gao, Weakly Supervised Video Representation Learning with Unaligned Text for Sequential Videos. CVPR 2023

Yicheng Qian, **Weixin Luo**, Dongze Lian, Xu Tang, Peilin Zhao, Shenghua Gao, SVIP: Sequence Verification for Procedures in Videos. CVPR 2022

Jiaming Chen, **Weixin Luo**, Wei Zhang, Lin Ma, Explore Inter-Contrast Between Videos via Composition for Weakly Supervised Temporal Sentence Grounding. AAAI 2022

Weixin Luo, Wen Liu, Dongze Lian, Shenghua Gao, Future Frame Prediction Network for Video Anomaly Detection. TPAMI 2021

Dongze Lian, Xianing Chen, Jing Li, **Weixin Luo**, Shenghua Gao, Locating and Counting Heads in Crowds With a Depth Prior. TPAMI 2021

Yang Jiao, Zequn Jie, **Weixin Luo**, Jingjing Chen, Yugang Jiang, Xiaolin Wei, Lin Ma, Two-stage Visual Cues Enhancement Network for Referring Image Segmentation. ACMMM 2021

Binbin Huang, Dongze Lian, **Weixin Luo**, Shenghua Gao, Look Before You Leap: Learning Landmark Features for One-Stage Visual Grounding. CVPR 2021

Zhaoyuan Yin, Jia Zheng, **Weixin Luo**, Shenhan Qian, Hanling Zhang, Shenghua Gao, Learning to Recommend Frame for Interactive Video Object Segmentation in the Wild. CVPR 2021

Zibo Zhao, Wen Liu, Yanyu Xu, Xianing Chen, **Weixin Luo**, Lei Jin, Bohui Zhu, Tong Liu, Binqiang Zhao, Shenghua Gao. Prior based human completion. CVPR 2021

Yuting Xiao, Yanyu Xu, Ziming Zhong, **Weixin Luo**, Jiawei Li, Shenghua Gao, Amodal Segmentation Based on Visible Region Segmentation and Shape Prior. AAAI 2021

Weixin Luo, Wen Liu, Shenghua Gao. Normal graph: Spatial temporal graph convolutional networks based prediction network for skeleton based video anomaly detection. Neurocomputing 2021

Kang Zhou, Jing Li, Yuting Xiao, Jianlong Yang, Jun Cheng, Wen Liu, **Weixin Luo**, Jiang Liu, Shenghua Gao. Memorizing structure-texture correspondence for image anomaly detection. TNNLS 2021

Kang Zhou, Jing Li, **Weixin Luo**, Zhengxin Li, Jianlong Yang, Huazhu Fu, Jun Cheng, Jiang Liu, Shenghua Gao. Proxy-bridged image reconstruction network for anomaly detection in medical images. TMI 2021

Weixin Luo, Wen Liu, Shenghua Gao. Graph convolutional neural network for skeleton-based video abnormal behavior detection. Generalization With Deep Learning: For Improvement On Sensing Capability. (Book Chapter) 2021

Peiyao Wang, **Weixin Luo**, Yanyu Xu, Shenghua Gao, SIRI-SDR for Spatial Description Resolution Task. NeurIPS 2020

Kang Zhou, Yuting Xiao, Jianlong Yang, Jun Cheng, Wen Liu, **Weixin Luo**, Zaiwang Gu, Jiang Liu, Shenghua Gao. Encoding Structure-Texture Relation with P-Net for Anomaly Detection in Retinal Images. ECCV 2020

Xiuye Gu, **Weixin Luo**, Michael S. Ryoo, Yong Jae Lee. Password-conditioned Anonymization and Deanonymization with Face Identity Transformers. ECCV 2020

Yanyan Fang, Shenghua Gao, Jing Li, **Weixin Luo**, Linfang He, Bo Hu. Multi-level feature fusion based locality-constrained spatial transformer network for video crowd counting. Neurocomputing 2020

Weixin Luo, Wen Liu, Dongze Lian, Shenghua Gao. Video Anomaly Detection with Sparse Coding Inspired Deep Neural Networks. TPAMI 2019

Dongze Lian, Jing Li, Jia Zheng, **Weixin Luo**, Shenghua Gao. Density Map Regression Guided Detection Network for RGB-D Crowd Counting and Localization. CVPR 2019

Ziheng Zhang, Zhengxin Li, Ning Bi, Jia Zheng, Jinlei Wang, Kun Huang, **Weixin Luo**, Yanyu Xu, Shenghua Gao PPGNet: Learning Point-Pair Graph for Line Segment Detection. CVPR 2019

Wen Liu, **Weixin Luo**, Shenghua Gao. Large Margin Video Anomaly Detection with A Few Anomalies. IJCAI 2019

Dongze Lian, Ziheng Zhang, **Weixin Luo**, lina hu, Minye Wu, Zechao Li, Jingyi Yu, Shenghua Gao. RGBD Based Gaze Estimation via Multi-task CNN. AAAI 2019

Jia Zheng, **Weixin Luo**, Zhixin Piao. Cascaded ConvLSTMs using semantically-coherent data synthesis for video object segmentation. ACCESS 2019

Wen Liu, **Weixin Luo**, Shenghua Gao. Future Frame Prediction for Anomaly Detection A New Baseline. CVPR 2018

Zongwei Wang, Xu Tang, **Weixin Luo**, Shenghua Gao. Face Aging with Identity-Preserved Conditional Generative Adversarial Network. CVPR 2018

Dongze Lian, Shenghua Gao, Lina Hu, **Weixin Luo**, Yanyu Xu, Lixin Duan, Jingyi Yu. Multi-view Multi-task Gaze Prediction with Deep Convolutional Neural Networks. TNNLS 2018

Kang Zhou, Zaiwang Gu, Wen Liu, **Weixin Luo**, Jun Cheng, Shenghua Gao, Jiang Liu. Multi-cell multi-task convolutional neural networks for diabetic retinopathy grading. EMBC 2018

Weixin Luo, Wen Liu, Shenghua Gao. A Revisit of Sparse Coding Based Anomaly Detection in Stacked RNN Framework. ICCV 2017

Weixin Luo, Wen Liu, Shenghua Gao. Remembering History with Convolutional LSTM for Anomaly Detection. ICME 2017

Meng Yang, Heyou Chang, **Weixin Luo**. Discriminative analysis-synthesis dictionary learning for image classification. Neurocomputing 2017

Meng Yang, Heyou Chang, **Weixin Luo**, Jian Yang. Fisher discrimination dictionary pair learning for image classification. Neurocomputing 2017

Meng Yang, Weiyang Liu, **Weixin Luo**, Linlin Shen. Analysis-Synthesis Dictionary Learning for Universality- Particularity Representation Based Classification. AAAI 2016

Meng Yang, **Weixin Luo**, Linlin Shen. Dictionary pair learning with block-diagonal structure for image classification. IScIDE 2015

Weixin Luo, Xuan Yang, Xiaoxiao Nan, Bingfeng Hu. GPU accelerated 3D image deformation using thin-plate splines. HPCC 2014

ACADEMIC SERVICES

Senior Program Committee: IJCAI 2021

Journal Reviewer: TPAMI, IJCV, TNNLS, TIP, TCSVT, Neurocomputing, ACCESS

Conference Reviewer: CVPR, ICCV, ECCV, NeuralPS, ICML, ICLR, AAAI, IJCAI, ACCV, WACV

HONOR AND AWARD

World's Top 2% scientist by Stanford University, 2023

Runner-up in SoccerNet Challenge on Multiple Object Tracking, CVPR 2023

Champion in ScanRefer Challenge on 3D Visual Grounding, ECCV 2022

Champion in H2O Challenge on Egocentric Action Recognition, ECCV 2022

Runner-up in H2O Challenge on Egocentric 3D Hand Pose Estimation, ECCV 2022

Runner-up in DanceTrack Challenge on Multi-human Tracking, ECCV 2022

Outstanding New Employee in Meituan, 2021

ICCV Doctoral Consortium, 2019

China National Scholarship (Ph.D.)

China National Scholarship (Undergraduate)

COMPUTER SKILL

Familiar with Python.

Familiar with Pytorch/Tensorflow.

Familiar with Linux/Docker.

Experiences with Caffe/Theano.

Experiences with Tensorrt/Triton.

Experiences with C/C++/CUDA and JAVA.