

Weitai Kang

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RESEARCH INTERESTS

Multimodal Learning, Large Multimodal Model, Visual Grounding, etc.

Education

University of Illinois Chicago

PhD student, Computer Science

Chicago, IL

Jan. 2024 – May. 2027(*expected*)

- Research Assistant, advised by Prof. [Yan Yan](#).

Illinois Institute of Technology

PhD student, Computer Science

Chicago, IL

Aug. 2022 – Dec. 2024

- Research Assistant, advised by Prof. [Yan Yan](#).

Sun Yat-sen University

B.S., Mathematics

Guangzhou, China

Sep. 2017 – July 2022

- GPA: 3.7/4.0
- Honors: Outstanding student scholarship (for four years)

RESEARCH EXPERIENCE

[1] [Weitai Kang](#), Haifeng Huang, Yuzhang Shang, Mubarak Shah, Yan Yan, “Robin3D: Improving 3D Large Language Model via Robust Instruction Tuning”, 2024.

[2] [Weitai Kang](#), Gaowen Liu, Mubarak Shah, Yan Yan, “SegVG: Transferring Object Bounding Box to Segmentation for Visual Grounding”, ECCV 2024.

[3] Yuzhang Shang, Bingxin Xu, [Weitai Kang](#), Mu Cai, Yuheng Li, Zehao Wen, Zhen Dong, Kurt Keutzer, Yong Jae Lee, Yan Yan, “Interpolating Video-LLMs: Toward Longer-sequence LMMs in a Training-free Manner”.

[4] [Weitai Kang](#), Mengxue Qu, Jyoti Kini, Yunchao Wei, Mubarak Shah, Yan Yan, “Intent3D: 3D Object Detection in RGB-D Scans based on Human Intention Language”.

[5] Mengxue Qu, [Weitai Kang](#), Yu Wu, Wu Liu, Xinchun Liu, Yan Yan, Yunchao Wei, Yao Zhao, “EIO: Explaining Intention-Oriented Segmentation”.

[6] Junyi Wu, [Weitai Kang](#), Hao Tang, Yuan Hong, Yan Yan, “On the Faithfulness of Vision Transformer Explanations”, CVPR 2024.

[7] Junyi Wu, Bin Duan, [Weitai Kang](#), Hao Tang, Yan Yan, “Token Transformation Matters: Towards Faithful Post-hoc Explanation for Vision Transformer”, CVPR 2024.

[8] [Weitai Kang](#), Mengxue Qu, Yunchao Wei, Yan Yan, “ACTRESS: Active Retraining for Semi-supervised Visual Grounding”.

[9] [Weitai Kang](#), Luowei Zhou, Junyi Wu, Changchang Sun, Yan Yan, “Visual Grounding with Attention-Driven Constraint Balancing”.

EMPLOYMENT EXPERIENCE

Sony AI

Research Intern

Oct. 2024 – Dec. 2024

Chicago, U.S.

- Research on 2D Large Multimodal Model.

University of Central Florida

Visiting Scholar

Jan. 2024 – July 2024

Orlando, U.S.

- Research on 3D Visual Grounding and 3D Large Multimodal Model.

Tencent <i>Machine Learning Engineer Intern</i>	Oct. 2021 – July 2022 <i>Shenzhen, China</i>
• Research on Human Pose Detection.	
SenseTime <i>Research Intern</i>	July 2021 – Sep. 2021 <i>Shenzhen, China</i>
• Research on Video Super-Resolution.	
Sun Yat-sen University <i>Research Assistant</i>	Dec. 2020 – Feb. 2021 <i>Guangzhou, China</i>
• Research on Image Super-Resolution.	

PROJECT EXPERIENCE

Mouse Behavior Analysis <i>Computer Vision and Multimedia Laboratory @ IIT</i>	Aug. 2022 – Aug. 2023 <i>Chicago, IL</i>
• Mouse detection, pose estimation, re-ID and behavior clustering.	
Theory Analysis of Cosmic Gravity Based on Convolutional Neural Network <i>Sun Yat-Sen University 2020 College Student Innovation and Entrepreneurship Training Program</i>	June 2020 – Dec. 2020 <i>Zhuhai, China</i>
• Based on the VGG model and the ResNet model, we classify the numerically simulated density fields generated by the three gravitational field models of the universe.	
The application of machine learning in asset allocation	May 2020 – Oct. 2020
• Use lightGBM to predict the rise and fall of ETFs for the next week, select the best 10 ETFs from 297 ETFs, and make weekly adjustments to maximize returns.	
Research on default risk of P2P online loan based on machine learning	Oct. 2018 – May 2019
• Build a Back-Propagation neural network to study the relationship between loan users' loan repayment status and the economic status of their city.	

COMPETITION EXPERIENCE

Mathematics competition of Chinese College Student	Oct. 2020
• Awarded Third Prize.	
Mathematics competition of Chinese College Student	Oct. 2019
• Awarded Third Prize.	
China Undergraduate Mathematical Contest in Model	Sep. 2019
• Awarded Third Prize.	
Mathematical Contest In Modeling	Jan. 2019
• Awarded Successful Participant.	

PROFICIENCY AND SKILLS

Technical Skills: PyTorch/Torch, Python, C/C++, Linux, Git, LaTeX, Matlab, etc.
Languages: English (proficient), Mandarin (native), Cantonese (native)

REFERENCES

Yan Yan, Associate Professor, University of Illinois Chicago, yyan55@uic.edu