

Shuaiyi Huang

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EDUCATION

University of Maryland, College Park, Maryland, USA

Ph.D. in Computer Science, Sep 2020 -

- GPA: 3.93/4.0
- Supervisor: Prof. Abhinav Shrivastava

ShanghaiTech University, Shanghai, China

M.Sc. in Computer Science, Sep 2017 - June 2020

- GPA: 3.71/4.0
- Supervisor: Prof. Xuming He

Tongji University, Shanghai, China

B.E. in Software Engineering, Sep 2013 - July 2017

- GPA: 4.62/5.0
- Rank: 12/180

RESEARCH INTEREST

My research interests lie in Computer Vision and Autonomous Agents, focusing on solving problems with limited or noisy supervision. I aim to enable AI agents to understand the visual world better and to develop multi-modal AI systems that integrate vision, language, and action understanding.

PUBLICATIONS

- **Shuaiyi Huang**, Mara Levy, Anubhav Gupta, Daniel Ekpo, Ruijie Zheng, Abhinav Shrivastava. TREND: Tri-teaching for Robust Preference-based Reinforcement Learning with Demonstrations. (*Under Review*), 2024.
- Ruijie Zheng*, Yongyuan Liang*, **Shuaiyi Huang**, Jianfeng Gao, Hal Daumé III, Andrey Kolobov, Furong Huang, Jianwei Yang. TraceVLA: Visual Trace Prompting Enhances Spatial-Temporal Awareness for Generalist Robotic Policies. (*Under Review*), 2024.
- Xiyang Wu*, Tianrui Guan*, Dianqi Li, **Shuaiyi Huang**, Xiaoyu Liu, Xijun Wang, Ruiqi Xian, Abhinav Shrivastava, Furong Huang, Jordan Lee Boyd-Graber, Tianyi Zhou, Dinesh Manocha. AUTOHAL-LUSION: Automatic Generation of Hallucination Benchmarks for Vision-Language Models. *Empirical Methods in Natural Language Processing (EMNLP Findings)*, 2024. [PDF Code](#)
- **Shuaiyi Huang**, Mara Levy, Zhenyu Jiang, Anima Anandkumar, Yuke Zhu, Linxi Fan, De-An Huang, Abhinav Shrivastava. ARDuP: Active Region Video Diffusion for Universal Policies. *Intelligent Robots and Systems (IROS)*, **Oral**, 2024. [PDF Code](#)
- **Shuaiyi Huang**, De-An Huang, Zhiding Yu, Shiyi Lan, Subhashree Radhakrishnan, Jose M. Alvarez, Abhinav Shrivastava, Anima Anandkumar. What is Point Supervision Worth in Video Instance Segmentation? *Computer Vision and Pattern Recognition Workshop (CVPRW)*, 2024. [PDF](#)
- **Shuaiyi Huang**, Saksham Suri, Kamal Gupta, Sai Saketh Rambhatla, Ser-nam Lim, Abhinav Shrivastava. UVIS: Unsupervised Video Instance Segmentation. *Computer Vision and Pattern Recognition Workshop (CVPRW)*, 2024. [PDF](#)

- Bo He, Xitong Yang, Hanyu Wang, Zuxuan Wu, Hao Chen, **Shuaiyi Huang**, Yixuan Ren, Ser-Nam Lim, Abhinav Shrivastava. Towards Scalable Neural Representation for Diverse Videos. *Computer Vision and Pattern Recognition (CVPR)*, 2023. [PDF Code](#)
- **Shuaiyi Huang**, Luyu Yang, Bo He, Songyang Zhang, Xuming He, Abhinav Shrivastava. Learning Semantic Correspondence with Sparse Annotations. *European Conference on Computer Vision (ECCV)*, 2022. [PDF Code](#)
- **Shuaiyi Huang**, Qiuyue Wang, Xuming He. Confidence-aware Adversarial Learning for Self-supervised Semantic Matching. *Chinese Conference on Pattern Recognition and Computer Vision (PRCV)*, 2020. [PDF Code](#)
- Shiyu Zhao, Lin Zhang, **Shuaiyi Huang**, Ying Shen, Shengjie Zhao. Dehazing Evaluation: Real-World Benchmark Datasets, Criteria, and Baselines. *Transactions on Image Processing (TIP)*, 2020. [PDF Code](#)
- **Shuaiyi Huang**, Qiuyue Wang, Songyang Zhang, Shipeng Yan, Xuming He. Dynamic Context Correspondence Network for Semantic Alignment. *International Conference on Computer Vision (ICCV)*, 2019. [PDF Code](#)
- Shiyu Zhao, Lin Zhang, **Shuaiyi Huang**, Ying Shen, Shengjie Zhao, Yukai Yang. Evaluation of Defogging: A Real-world Benchmark Dataset, A New Criterion and Baselines. *International Conference on Multimedia and Expo (ICME)*, 2019. [PDF Code](#)
- Chen Zhu, Yanpeng Zhao, **Shuaiyi Huang**, Kewei Tu, Yi Ma. Structured Attentions for Visual Question Answering. *International Conference on Computer Vision (ICCV)*, 2017. [PDF Code](#)

TEACHING EXPERIENCES

- Teaching Assistant, CS 818: Decision-making for Robotics, 2024, University of Maryland, College Park
- Teaching Assistant, CS 351: Algorithms, 2023, University of Maryland, College Park
- Teaching Assistant, CS 280: Deep learning, 2018, ShanghaiTech University

INTERNSHIPS

Research Intern, **NVIDIA**, CA, USA May - Aug, 2023
 Work on *video diffusion for robotics*. Paper accepted by **IROS 2024 (Oral)**.
 Mentor: De-An Huang, Linxi Fan, Yuke Zhu

Research Intern, **NVIDIA**, Remote, USA May - Nov, 2022
 Work on *video instance segmentation with minimal supervision*. Paper accepted by **CVPRW 2024**.
 Mentor: Zhiding Yu, De-An Huang, Shiyi Lan, Anima Anandkumar

HONORS AND AWARDS

Graduate Dean's Scholarship, University of Maryland, College Park	2020, 2021
ShanghaiTech University Merit Student	2019
ShanghaiTech University Outstanding Student	2018
Second Prize & First Prize, Tongji University Academic Scholarship	2015, 2016
Tongji University National Encouragement Scholarship & Outstanding Student	2015

SERVICES

Reviewed for CVPR, ECCV, ICCV, IJCV, TIP, WACV, ACCV, ICRA