YIFEI HUANG

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WORK

The University of Tokyo, Japan *April 2021 - now*
Project Assistant Professor
Institute of Industrial Science
Research interest: first person computer vision, computer vision applications using gaze

EDUCATION

The University of Tokyo, Japan *April 2018 - March 2021*
Ph.D. in Information Science & Technology
Graduate School of Information Science and Technology

Supervisor: Prof. Yoichi Sato
Research interest: first person computer vision, computer vision applications using gaze

The University of Tokyo, Japan *October 2015 - March 2018*
M.Sc. in Information & Computer Engineering
Graduate School of Information Science and Technology

Supervisor: Prof. Yoichi Sato
Research interest: computer vision applications using gaze

Shanghai Jiao Tong University, China *September 2011 - June 2015*
B.Sc. in Automation, IEEE honor class
School of Electronics, Information and Electrical Engineering

Supervisor: Assoc. Prof. Chongyang Zhang
Graduated with postgraduate recommendation.

EXPERIENCE

Sensetime Autonomous Driving July 2020 - Nov 2020
Internship *Shanghai, China*

· Supervisor: Dr. Yikang Li
· Lidar-image fusion for autonomous driving

Omron Sinic X April 2020 - June 2020
Internship *Tokyo, Japan*

· Supervisor: Dr. Ryo Yonetani and Dr. Felix von Drigalski
· Robot in-hand 6D pose estimation

Carnegie Mellon University April 2019 - July 2019
Visiting Scholar *Pittsburgh, PA, United States*

· Supervisor: Assoc. Prof. Kris Kitani

· Mentor: Nicholas Rhinehart, Ben Newman
· Project: Gaze prediction & forecasting under teleoperation environment.

Huawei Japan Research Center   June 2017 - March 2018
Internship   *Tokyo, Japan*

· Supervisor: Dr. Bo Zheng
· Image matting, 3D face relighting.

DJI Japan   December 2017 - January 2018
Internship   *Tokyo, Japan*

· Supervisor: Dr. Ming Shao
· HDR imaging

Univsersity of British Columbia   July 2012 - August 2012
Exchange Student   *Vancouver, BC, Canada*

· English language training

PUBLICATIONS

[1] **Yifei Huang**, Yusuke Sugano, and Yoichi Sato. "Improving Action Segmentation via Graph Based Temporal Reasoning". In: *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)* (2020).

[2] **Yifei Huang**, Minjie Cai, Zhenqiang Li, and Yoichi Sato. "Mutual Context Network for Jointly Estimating Egocentric Gaze and Actions". In: *IEEE Transactions on Image Processing* (2020).

[3] **Yifei Huang**, Minjie Cai, Kera Hiroshi, Ruo Yonetani, Keita Higuchi, and Yoichi Sato. "An Ego-Vision System for Discovering Human Joint Attention". In: *IEEE Transactions on Human-Machine Systems* (2020).

[4] **Yifei Huang**, Minjie Cai, Zhenqiang Li, and Yoichi Sato. "Predicting Gaze in Egocentric Video by Learning Task-dependent Attention Transition". In: *European Conference on Computer Vision (ECCV)* (2018). **(oral presentation, acceptance rate 2%)**.

[5] **Yifei Huang**, Minjie Cai, Hiroshi Kera, Ryo Yonetani, Keita Higuchi, and Yoichi Sato. "Temporal Localization and Spatial Segmentation of Joint Attention in Multiple First-Person Videos". In: *Computer Vision Workshop (ICCVW), 2017 IEEE International Conference on* (2017). (oral presentation), pp. 2313–2321.

[6] **Yifei Huang**, A.Benjamin Newman, Yoichi Sato, Henny Admoni, Nicholas Rhinehart, and Kris Kitani. "Recognizing Gaze in Robot Co-Manipulation Tasks: Challenges and Feasibility". In: *In submission to ETRA2021* (2021).

[7] **Yifei Huang**, Lijin Yang, Lin Gu, Yoichi Sato, and Tatsuya Harada. "Diagnose-dependent Gaze Estimation on Retinal Image Analysis". In: *In submission to Medical Image Analysis* (2021).

[8] **Yifei Huang**, Lijin Yang, Lin Gu, Yoichi Sato, and Tatsuya Harada. "Leveraging Auxiliary Cognition via Human Gaze for 3D Segmentation with Limited Training Data". In: *In submission to MICCAI* (2021).

[9] Hong Chen, **Yifei Huang**, and Hideki Nakayama. "Semantic Aware Attention Based Deep Object Co-segmentation". In: *Asian Conference on Computer Vision (ACCV)* (2018).

[10] Felix von Drigalski, Kennosuke Hayashi, **Yifei Huang**, Ryo Yonetani, Masashi Hamaya, Kazutoshi Tanaka, and Yoshihisa Ijiri. "Precise Multi-Modal In-Hand Pose Estimation using Low-Precision Sensors for Robotic Assembly". In: *International Conference on Robotics and Automation (ICRA)* (2021).

[11] Zhenqiang Li, **Yifei Huang**, Minjie Cai, and Yoichi Sato. "Manipulation-skill Assessment from Videos with Spatial Attention Network". In: *2019 IEEE International Conference on Computer Vision Workshop (ICCVW)* (2019).

[12] Guangming Wu, Zhiling Guo, Zekun Cai, Xiaodan Shi, Xin Ding, **Yifei Huang**, Yimin Guo, Yinqiang Zheng, and Ryosuke Shibasaki. "Learn to Recover Visible Color for Video Surveillance in a Day". In: *European Conference on Computer Vision (ECCV)* (2020). **(oral presentation, acceptance rate 3%)**.

[13] Zhenqiang Li, Weimin Wang, Zuoyue Li, **Yifei Huang**, and Yoichi Sato. "Toward Visually Explaining Video Classification Networks by Pertubation-based Method". In: *IEEE Winter Conference on Applications of Computer Vision (WACV)* (2021).

[14] Hong Chen, **Yifei Huang**, and Hideki Nakayama. "Commonsense Knowledge Aware Concept Selection For Diverse and Informative Visual Storytelling". In: *AAAI* (2021).

[15] Liu Yang, Zhou Lei, Bai Xiao, **Yifei Huang**, Gu Lin, Zhou Jun, and Harada Tatsuya. "Goal-Oriented Gaze Estimation for Zero-Shot Learning". In: *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)* (2021).

[16] Hong Chen, **Yifei Huang**, and Hideki Nakayama. "GraphPlan: Story Generation by Planning with Event Graph". In: (2021). In submission to AAAI 2021.

HONORS

Global Creative Leader (GCL) Fellowship, The University of Tokyo, Japan	*2018 – 2021*
Outstanding graduation thesis, Shanghai Jiao Tong University, China	*2015*
National Endeavour Fellowship, Shanghai Jiao Tong University, China	*2012 – 2014*

TECHNICAL STRENGTHS

Programming Languages	Python, C++, MATLAB
Deep learning frameworks	PyTorch, Caffe
Others	Photoshop, After Effects, PHP, MySQL

LANGUAGES

Chinese	Mother language.
English	TOEFL 105/120 (2018), TOEIC 980/990 (2018)
Japanese	JLPT N2 (2014)

REFERENCES

Prof. Yoichi Sato
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`http://www.hci.iis.u-tokyo.ac.jp/~ysato/`
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Assoc. Prof. Kris Kitani
Robotics Institute, School of Computer Science, Carnegie Mellon University
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Assoc. Prof. Yusuke Sugano
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