

JUNYEONG KIM

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Ph.D. Student, Artificial Intelligence & Machine Learning Lab.,
KAIST(Korea Advanced Institute of Science and Technology)

RESEARCH INTERESTS

- Deep Learning
- Computer Vision
- Visual Question Answering
- Vision-Language Reasoning

EDUCATION

KAIST Ph.D. Student, School of Electrical Engineering <ul style="list-style-type: none">• Advisor: Prof. Chang D. Yoo	Daejeon, Republic of Korea <i>Mar. 2017 - Present</i>
KAIST M.S., School of Electrical Engineering <ul style="list-style-type: none">• Thesis: "Partial Person Re-identification with Convolutional Neural Network and Attention Model"• Advisor: Prof. Chang D. Yoo	Daejeon, Republic of Korea <i>Mar. 2015 - Feb. 2017</i>
KAIST B.S., School of Electrical Engineering	Daejeon, Republic of Korea <i>Mar. 2011 - Feb. 2015</i>

RESEARCH PROJECTS

Microsoft Research Asia Open-ended Multi-modal Video Question Answering <ul style="list-style-type: none">• Advisor: Prof. Chang D. Yoo• Researching Open-ended Multi-modal Video Question Answering & Dialogue system, submitted 1 AAAI paper	Jun. 2020 - Present
Samsung Research Center Multi-modal Video Question Answering <ul style="list-style-type: none">• Advisor: Prof. Chang D. Yoo• Researched Multi-modal Video Question Answering system, published 2 CVPR papers	Jan. 2018 - Dec. 2019
Samsung Research Center Multi-modal Video Categorization <ul style="list-style-type: none">• Advisor: Prof. Chang D. Yoo• Researched Multi-modal Video Categorization system, published 1 ECCV paper	Mar. 2017 - Dec. 2017
Samsung Electronics Defect Detection in Semiconductor <ul style="list-style-type: none">• Advisor: Prof. Chang D. Yoo• Researched Defect Detection system on Semiconductor	Jun. 2016 - Dec. 2016
LG Electronics Defect Detection in Circuit Board <ul style="list-style-type: none">• Advisor: Prof. Chang D. Yoo• Researched Defect Detection system on Circuit board	Jun. 2016 - Dec. 2016
Samsung DMC Research Center Malware Detection in Android OS <ul style="list-style-type: none">• Advisor: Prof. Chang D. Yoo• Researched Malware Detection system on Android OS	Jun. 2015 - Dec. 2015

PUBLICATIONS

- **Junyeong Kim**, Minuk Ma, Pham X. Trung, Kyunsoo Kim, Chang D. Yoo, “Modality Shifting Attention Network for Multi-modal Video Question Answering”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020
- Minuk Ma, Sunjae Yoon, **Junyeong Kim**, Youngjoon Lee, Sunghun Kang, Chang D. Yoo, “VLANet: Video-Language Alignment Network for Wealy-Supervised Video Moment Retrieval”, *European Conference on Computer Vision (ECCV)*, 2020
- **Junyeong Kim**, Minuk Ma, Kyunsoo Kim, Sungjin Kim, Chang D. Yoo, “Progressive Attention Memory Network for Movie Story Question Answering”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019
- **Junyeong Kim**, Minuk Ma, Kyunsoo Kim, Sungjin Kim, Chang D. Yoo, “Gaining Extra Supervision via Multi-task Learning for Multi-modal Video Question Answering”, *Proceedings of the International joint Conference on Neural Networks (IJCNN)*, 2019
- Younghoon Jung, SeongKwang Hong, Heeseung Wang, Jaehyun Han, Trung X. Pham, Hyunsin Park, **Junyeong Kim**, Sunghun Kang, Chang D. Yoo, Keonjae Lee, “Flexible Piezoelectric Acoustic Sensors and Machine Learning for Speech Processing”, *Advanced Materials*, Oct 2019.
- Sunghun Kang, **Junyeong Kim**, Hyunsoo Choi, Sungjin Kim, Chang D. Yoo, “Pivot Correlational Neural Network for Multimodal Video Categorization”, *European Conference on Computer Vision (ECCV)*, 2018
- Ohchul Kwon, **Junyeong Kim**, Chang D. Yoo, “Action Recognition: First-and Second-order 3D Feature in Bi-directional Attention Network”, *IEEE International Conference on Image Processing (ICIP)*, 2018
- **Junyeong Kim**, Chang D. Yoo, “Deep Partial Person Re-identification via Attention Model”, *IEEE International Conference on Image Processing (ICIP)*, 2017
- **Junyeong Kim**, Hyoungwoo Park, Chang D. Yoo, “A study on Weighted Softmax”, *International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC)*, 2017

EXPERIENCES

Challenge

- ILSVRC 2016 Object Detection from Video (VID) in team “KAIST-SLSP” and achieved 5th place.
- MS COCO instance segmentation 2019 in team “DeepAR(ETRIxKAIST_AIM)” and achieved 4th place.

Reviewer

- IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2020
- IEEE International Conference on Computer Vision (ICCV) 2019
- European Conference on Computer Vision (ECCV) 2020
- Neural Information Processing Systems (NIPS) 2020
- International Conference on Machine Learning (ICML) 2020
- International Conference on Learning Representations (ICLR) 2021
- AAAI Conference on Artificial Intelligence (AAAI) 2020,2021
- International Conference on Image Processing (ICIP) 2019,2020
- Asian Conference on Computer Vision (ACCV) 2020
- Winter Conference on Applications of Computer Vision (WACV) 2021

Talk

- Invited Paper Presentation at Video Turing Test Workshop, ICCV 2019
- Tutorial on Recurrent Neural Networks at Sungnam-KAIST AI Class 2018, 2019, 2020

Teaching

- Tutorial on Visual Question Answering at EE531 Statistical Learning Theory fall 2018
- Tutorial on PyTorch at EE488 Introduction to Machine Learning Spring 2019
- TA for EE531 Statistical Learning Theory 2017, 2018
- TA for EE488 Introduction to Machine Learning 2016, 2017, 2018, 2019
- TA for EE405 Electronics Design Lab. 2015

TECHNICAL SKILLS

Languages: Python, Matlab

Frameworks: Tensorflow, PyTorch