Curriculum Vitae

Name : Donggeun Yoo (유동근)

Date of Birth : August 13, 1986

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Education

2013. 3. – 2019. 2. Ph.D. in School of Electrical Engineering, KAIST, Daejeon, South Korea.

Thesis Deep Learning Based Visual Recognition Robust Against Background Clutters

Advisor Prof. In So Kweon

2011. 2. – 2013. 2. MS in School of Electrical Engineering, KAIST, Daejeon, South Korea.

Thesis Learning Codeword Characteristics for Image Retrieval Using Very High Dimensional Bag-of-Words Representation

Advisor Prof. In So Kweon

2006. 3. – 2011. 1. BS in School of Electrical Engineering, KAIST, Daejeon, South Korea.

Work Experience

2020. 1. – Present Co-founder & Chief of Research at Lunit Inc., Seoul, South Korea.

2018. 3. – 2019. 12. Co-founder & Head of Research at Lunit Inc., Seoul, South Korea.

2017. 3. – 2018. 2. Co-founder & Research Scientist at Lunit Inc., Seoul, South Korea.

2016. 5. – 2016. 8. Research intern at Adobe Research, San Jose, CA, USA.

Topic Large-Scale Video Representation Learning

Advisor Hailin Jin and Joon-Young Lee

Research Interest

Machine Learning Deep learning, unsupervised learning, semi-supervised learning, representation learning, active learning, transfer learning, domain adaptation, large-scale learning method, information retrieval.

Computer Vision Visual recognition, image classification, object detection, semantic segmentation, image retrieval, medical image analysis, data-driven imaging bio-marker (DIB).

Technical Achievements

2019. 11. Visual Domain Adaptation Challenge (VisDA) in ICCV 2019
Team Lunit won the **1st place** in the semi-supervised domain adaptation task.
Method: Reducing Domain Gap via Style-Agnostic Networks

2017. 3. My transfer learning method, Multi-Scale Pyramid Pooling (MPP), was employed to **Samsung Galaxy S8** Bixby Vision for fine-grained object classification and product retrieval.

2015. 12. ImageNet Large Scale Visual Recognition Challenge (**ILSVRC**) in ICCV 2015
Team Lunit-KAIST won the **5th place** at the main track (classification and localization) among 23 participants including Google, Microsoft Research, Samsung Electronics, and Qualcomm.
Invited to the ILSVRC Workshop to provide a talk about "Multi-Class AttentionNet", which was selected as one of top 3 novel localization approaches.

2009. 2. Grand Prize in KAIST Undergraduate Research Program (URP)

Topic Portable Noncontact Heartbeat Sensor Using LC Oscillation

Advisor Prof. Songcheol Hong

Academic Activities

2017. – Present Reviewer in CVPR, ICCV, ECCV, and other conferences.

2019. 11. Invited talk at a medical conference: Annual Symposium of the Korea Endocrine Society

Topic The Potential of AI in Medicine: From Diagnostic AI to Predictive Biomarker

2019. 10. Organizing an ICCV 2019 Workshop: Visual Recognition for Medical Images (VRMI'19)

Co-organizers Dr. Hoo-Chang Shin (NVIDIA) and Pf. Kyunghyun Cho (NYU&FAIR)

2019. 10. Invited talk at MICCAI 2019 Workshop: Medical Informatics in Medical Image Analytics (MIMIA'19)

Topic Reducing Annotation Cost in Medical Image Analysis

2019. 4. Invited talk at a medical conference: Korea International Gastric Cancer Week 2019

Topic The Potential of AI in Medicine: From Diagnostic AI to Predictive Biomarker

2015. 12. Invited talk at ICCV 2015 Workshop: ImageNet and MS COCO Visual Recognition Challenges Joint Workshop (ILSVRC)

Topic Multi-class AttentionNet

Selected Publications

1. Jaehwan Lee, **Donggeon Yoo**, Jung Yin Huh, Hyo-Eun Kim, *Photometric Transformer Networks and Label Adjustment for Breast Density Prediction*, IEEE International Conference on Computer Vision (ICCV) Workshop, 2019.
2. Inwan Yoo, **Donggeun Yoo**, Kyunghyun Paeng, *PseudoEdgeNet: Nuclei Segmentation only with Point Annotations*, International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI), 2019. - **Oral**

3. Seokju Lee, Junsik Kim, Tae-Hyun Oh, Yongseop Jeong, **Donggeun Yoo**, Stephen Lin, In So Kweon, *Visuomotor Understanding for Representation Learning of Driving Scenes*, The British Machine Vision Conference (BMVC), 2019.
4. **Donggeun Yoo**, In So Kweon, *Learning Loss for Active Learning*, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2019. - **Oral**
5. Jongchan Park, Joon-Young Lee, **Donggeun Yoo**, In So Kweon, *Distort-and-Recover: Color Enhancement using Deep Reinforcement Learning*, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2018.
6. Dahun Kim, Donghyeon Cho, **Donggeun Yoo**, In So Kweon, *Learning Image Representations by Completing Damaged Jigsaw Puzzles*, IEEE Winter Conference on Applications of Computer Vision (WACV), 2018.
7. Dahun Kim, Donghyeon Cho, **Donggeun Yoo**, In So Kweon *Two-phase learning for weakly supervised object localization* IEEE International Conference on Computer Vision (ICCV), 2017.
8. Youngjin Yoon, Hae-Gon Jeon, **Donggeun Yoo**, Joon-Young Lee, In So Kweon, *Light-field image super-resolution using convolutional neural network*, IEEE Signal Processing Letters, 24(6), 848-852, 2017.
9. **Donggeun Yoo**, Sunggyun Park, Kyunghyun Paeng, Joon-Young Lee, In So Kweon, *Action-Driven Object Detection with Top-Down Visual Attentions*, arXiv preprint, 2016.
10. **Donggeun Yoo**, Namil Kim, Sunggyun Park, Anthony S Paek, In So Kweon, *Pixel-Level Domain Transfer*, European Conference on Computer Vision (ECCV), 2016.
11. **Donggeun Yoo**, Sunggyun Park, Joon-Young Lee, Anthony S Paek, In So Kweon *Attentionnet: Aggregating weak directions for accurate object detection* IEEE International Conference on Computer Vision (ICCV), 2015.
12. Youngjin Yoon, Hae-Gon Jeon, **Donggeun Yoo**, Joon-Young Lee, In So Kweon, *Learning a deep convolutional network for light-field image super-resolution*, IEEE International Conference on Computer Vision (ICCV) Workshop, 2015.
13. **Donggeun Yoo**, Sunggyun Park, Joon-Young Lee, In So Kweon, *Multi-scale pyramid pooling for deep convolutional representation*, IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Deep Vision Workshop, 2015.
14. **Donggeun Yoo**, Kyunghyun Paeng, Sunggyun Park, Jungin Lee, Seungwook Paek, Sung-Eui Yoon, In So Kweon, *PRISM: a system for weighted multi-color browsing of fashion products*, International Conference on World Wide Web (WWW), 2014.