

Jiyoung Lee

PH.D. CANDIDATE · YONSEI UNIVERSITY

Digital Image Media Laboratory, C129, The 3rd Engineering Building, Yonsei-ro 50, Seodaemun-Gu, Seoul, Rep. of KOREA

☎ (+82) 10-2413-9335 | ✉ easy00@yonsei.ac.kr | 🌐 <https://easy00.github.io/> | 📧 leeje0924

Summary

Research Interest Computer vision, affective computing, machine learning
Current Focus Visual reasoning, meta-learning, audio-visual scene analysis, video understanding

Education

Yonsei University

PH.D. CANDIDATE IN SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING

- Working with Prof. Kwanghoon Sohn.

Seoul, S.Korea

Mar. 2016 - Present

Yonsei University

B.S. IN SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING

Seoul, S.Korea

Mar. 2012 - Feb. 2016

Experience

Microsoft Research

RESEARCH INTERN

- HUE: Human Understanding and Empathy Group.
- Working with Dr. Daniel McDuff and Dr. Yale Song.

Redmond, USA

April. 2020 - Present

Publication

International Journal

“Multi-modal Recurrent Attention Networks for Facial Expression Recognition”

JYOUNG LEE, SUNOK KIM, SEUNGRYONG KIM, AND KWANGHOON SOHN

- IEEE Transaction on Image Processing (TIP). (Accepted) (Impact Factor: 8.980)

May. 2020

“Learning Discriminative Action Tubelets for Weakly-supervised Action Detection”

JYOUNG LEE, SEUNGRYONG KIM, SUNOK KIM, AND KWANGHOON SOHN

- IEEE Transaction on Image Processing (TIP). (Under Review)

Jul. 2020

International Conference

“SumGraph: Video Summarization via Recursive Graph Modeling”

JUNGIN PARK*, JYOUNG LEE*, IG-JAE KIM, AND KWANGHOON SOHN (* INDICATES EQUAL CONTRIBUTION.)

- European Conference on Computer Vision (ECCV)

Aug. 2020

“Context-Aware Emotion Recognition Networks”

JYOUNG LEE, SEUNGRYONG KIM, SUNOK KIM, JUNGIN PARK, AND KWANGHOON SOHN

- IEEE International Conference on Computer Vision (ICCV) (25% acceptance rate)

Oct. 2019

“Video Summarization by Learning Relationships between Action and Scene”

JUNGIN PARK, JYOUNG LEE, SANGRYUL JEON, AND KWANGHOON SOHN

- IEEE International Conference on Computer Vision Workshop (ICCVW)

Oct. 2019

“Graph Regularization Network With Semantic Affinity for Weakly-supervised Temporal Action Localization”

JUNGIN PARK, JYOUNG LEE, SANGRYUL JEON, SEUNGRYONG KIM, AND KWANGHOON SOHN

- IEEE International Conference on Image Processing (ICIP)

Sep. 2019

“Audio-Visual Attention Networks for Emotion Recognition”

JYOUNG LEE, SUNOK KIM, SEUNGRYONG KIM, AND KWANGHOON SOHN

- ACM Multimedia Workshop- Workshop on Audio-Visual Scene Understanding for Immersive Multimedia (MMW)

Oct. 2018

“Learning to Detect, Associate, and Recognize Human Actions and Surrounding Scenes in Untrimmed Videos”

JUNGIN PARK, SANGRYUL JEON, SEUNGRYONG KIM, **JIYOUNG LEE**, SUNOK KIM, AND KWANGHOON SOHN

Oct. 2018

- ACM Multimedia Workshop- The 1st Workshop and Challenge on Comprehensive Video Understanding in the Wild (MMW)

“Spatiotemporal Attention Based Deep Neural Networks for Emotion Recognition”

JIYOUNG LEE, SUNOK KIM, SEUNGRYONG KIM, AND KWANGHOON SOHN

Apr. 2018

- IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)

“Automatic 2D-to-3D Conversion using Multi-scale Deep Neural Network”

JIYOUNG LEE, HYUNGJOO JUNG, YOUNGJUNG KIM, AND KWANGHOON SOHN

Sep. 2017

- IEEE International Conference on Image Processing (ICIP)

Patent

“Audio-Video Matching Area Detection Apparatus and Method”

JIYOUNG LEE, AND KWANGHOON SOHN

Jul. 2019

- Korea patent, 10-2019-0090937

“Apparatus and Method for Recognizing Activity and Detecting Activity Area in Video”

JIYOUNG LEE, AND KWANGHOON SOHN

Mar. 2019

- Korea patent, 10-2019-0034501

“Emotion Recognition Apparatus and Method Based on Spatiotemporal Attention”

JIYOUNG LEE, AND KWANGHOON SOHN

May. 2018

- Korea patent, 10-2018-0053306

Research Experiences

To create AI systems that act appropriately and effectively in novel situations that occur in open worlds

[S.Korea](#)

FUNDED BY INSTITUTE OF INFORMATION & COMMUNICATION TECHNOLOGY

Mar. 2020 – Present

- Developed an algorithm for domain generalization using meta-learning.

Deep Identification and Tracking of Missing Person in Heterogeneous CCTV

[S.Korea](#)

FUNDED BY MINISTRY OF SCIENCE, NATIONAL RESEARCH FOUNDATION

Sep. 2018 – Present

- Developed an algorithm for pedestrian detection.

Intelligent Virtual Reality: Deep Audio-Visual Representation Learning for Multimedia Perception and Reproduction

[S.Korea](#)

FUNDED BY INSTITUTE OF INFORMATION & COMMUNICATION TECHNOLOGY.

Sep. 2017 – Aug. 2019

- Developed an algorithm using audio-visual data.

Fundamental Study of Vision Algorithms for Comprehensive and Thorough Understanding of Videos

[S.Korea](#)

FUNDED BY MINISTRY OF SCIENCE, ICT AND FUTURE PLANNING.

Sep. 2017 - Present

- Developed an algorithm for scene understanding untrimmed videos.

Development of the High-Precision AR & VR Contents Based on Smart-Car Sensors

[S.Korea](#)

FUNDED BY INSTITUTE OF INFORMATION & COMMUNICATION TECHNOLOGY

Jan. 2017 – Dec. 2017

- Developed an algorithm for dense stereo matching in outdoor environments.

Emotional Intelligence Technology to Infer Human Emotion and Carry on Dialogue Accordingly

[S.Korea](#)

FUNDED BY INSTITUTE OF INFORMATION & COMMUNICATION TECHNOLOGY.

Sep. 2017 - Jun. 2018

- Developed an algorithm for inferring human emotion from multi-spectral images.

High Quality 2D-to-Multiview Contents Generation from Large-Scale RGB+D Database

[S.Korea](#)

FUNDED BY INSTITUTE OF INFORMATION & COMMUNICATION TECHNOLOGY.

Mar. 2016 – Aug. 2017

- Developed an algorithm for inferring high-quality depth from a single 2-D image.

Yonsei University, Dept. of Electrical and Electronic Engineering

[S.Korea](#)

TEACHING ASSISTANT.

Mar. 2016 – Feb. 2017

- Digital signal processing, Electrical and electronic engineering experiments: fundamentals.

Professional Activities

Reviewers

IEEE ACCESS

Media Coverage

“A deep learning technique for context-aware emotion recognition.”

TECHXPLORE

Aug. 2019

Talks

“Comprehensive Video Understanding: from Recognition to Reasoning.”

MICROSOFT RESEARCH AI BREAKTHROUGHS

Sep. 2020

Honors & Awards

2019	3rd Award , CoVieW 2019 (ICCV Challenge)	CoVieW'19
2018	Silver Prize , Ulsan KBS UCC Contest	KBS
2016	Finalist & Award , University Startup 300	Ministry of Education, S.Korea
2016	2nd Award , Sungshin Startup 4th Idea Contest	Sungshin University
2015	Silver Prize , Yonsei Creative Design Challenge	Yonsei University
2015	Award , Campus Reboot Startup Camp	Ministry of Education, S.Korea

Skills

Programming	Python, C/C++, JAVA, Ruby, Lua, MATLAB, OpenCV, LaTeX, Linux
Deep learning	PyTorch, Tensorflow, Caffe, Torch
Web	Django, Ruby on Rails, HTML5, CSS, Javascript
Languages	Korean, English