

# Curriculum Vitae

## - Jisu Kim -

### CONTACT INFORMATION

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### POSITIONS

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**Research Assistant,** *June 2018 – February 2021*  
Image and Signal Information Processing Laboratory(ISIP), Director : Deokwoo Lee  
Keimyung University, Daegu, Republic of Korea

**Visiting Researcher** *March 2020 – August 2020*  
Alternative Powertrain Research Lab (APRL), Supervisor : Songyul Choe  
Auburn University, AL, USA

**Graduate Student, Master Course,** *March 2019 – February 2021*  
Department of Computer Engineering, Advisor : Deokwoo Lee  
Keimyung University, Daegu, Republic of Korea

**Researcher** *April 2021 – present*  
Electronic Equipment System Lab.  
Gyeongbook Research Institute of Vehicle Embedded Technology(GIVET), Republic of Korea

### RESEARCH INTERESTS

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Primary research interest covers theory and applications of image processing, signal processing and analysis, computer vision, pattern recognition and machine learning for diverse applications such as 3D vision system, robotics, machine vision, activity recognition, dimensionality reduction, automotive engineering and others.

- Computer Vision
- Pattern Recognition
- Activity recognition
- Deep Learning / Machine Learning
- Learning based data prediction

### EDUCATION / QUALIFICATIONS

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**M.S in Computer Engineering** *March 2019 – February 2021*  
(Advisor : Dr. Deokwoo Lee)  
**Keimyung University**, Daegu, South Korea  
(Thesis title : Activity Recognition Based On Visual Attention Using Deep Neural Network)

**B.S. in Computer Engineering** (Minor in Japanese Studies) *March 2013 – February 2019*  
**Keimyung University**, Daegu, South Korea  
(Mandatory military service in Korean marine corps: 2014 – 2016)

### PROJECTS

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All of the projects are conducted with skills of Python, C#/C++/Go, MATLAB.

- Depth Camera Calibration Based Deep Learning and Real-Scene for an Intelligent Vision System for unmanned moving objects 09/2019 - 02/2022 (National Research Foundation of Korea, NRF)

- 3D Mesh Structure and Texture Generation using Plenoptic camera 08/2019 - 11/2019 (Electronics and Telecommunications Research Institute, ETRI)
- Learning based prediction of SMP(system marginal price) in Hydroelectricity system 06/2019 - 11/2019 (Korea Water Resources Corporation, K-water)
- Pedestrian detection and tracking using multi-sensor fusion 06/2019 - 01/2020 (National Research Foundation of Korea, NRF)
- Development of prediction system using Power Station with Intelligent Charge and Discharge System 06/2019 - 02/2020 (Korea Technology Information Promotion Agency for SMEs, TIPA)
- AI flagship Project 05/2018 - 12/2020 (Ministry of Science and ICT, MSIT)
  - Development of intelligent interaction technology based on content awareness and human intention understanding
- Keimyung University Project 05/2018 - 04/2020
  - An efficient camera calibration for smart vision system, Keimyung Univ.

## SKILLS

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**Python, C#, C++, Go, JAVA, PHP, SQL, MATLAB** etc.  
**Tensorflow, PyTorch**

## PUBLICATIONS

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### Conference (C) and Journal (J) (Conference 7, Journal 2)

- J2 **Jisu Kim**, Deokwoo Lee\*, Activity Recognition with Combination of Deeply Learned Visual Attention and Pose Estimation, Applied Sciences, Vol. 11, pp. 1-18, 2021 (**SCIE**).
- C7 **Jisu Kim**, Song-yul Choe\*, Development of algorithms for vision inspection systems for module lines using Artificial Intelligence, International Conference on Innovation Convergence Technology(ICICT) 2021, Jeju, Korea. (**oral**)
- C6 **Jisu Kim**, Song-yul Choe\*, Development of algorithms for vision inspection systems for module lines using Artificial Intelligence, Autumn Annual Conference of The Korean Society of Automotive Engineers(KSAE) 2020, Daegu, Korea. (**oral**)
- C5 **Jisu Kim**, Deokwoo Lee\*, Action Recognition using Pose Estimation with an Artificial 3D Coordinates and CNN, Electronic Imaging (EI) 2020, Burlingame, California, USA. (**oral**)
- C4 **Jisu Kim**, Deokwoo Lee\*, Improvement of a Speed for View Synthesis with Robust Feature Detection, International Conference on Algorithms, Machine Learning and Signal Processing Singapore (AMLSP) 2019, Nanyang Technological University, Singapore. (**oral**)
- C3 **Jisu Kim**, Cheolhyeong Park, Ju O Kim and Deokwoo Lee\*, Occlusion handled block-based stereo matching with image segmentation, International Conference on Signal Image Processing and Multimedia (SIPM) 2019, Sydney, Australia. (**oral**)
- C2 **Jisu Kim**, OhEun Kwon and Deokwoo Lee\*, LSTM based intelligent forecasting power load and SMP, Autumn Annual Conference of KIEE, Nov. 2019, Ansan-si, Gyeonggi-do.
- C1 **Jisu Kim**, Jaehoon Choi and Deokwoo Lee\*, Homography based Image Synthesis using Multiple Camera, Conference on Information and Control Systems, Oct. 2019, Gyeongju-si, Gyeongsangbuk-do.
- J1 **Jisu Kim**, Cheolhyeong Park and Deokwoo Lee\*, Block-based Stereo Matching Using Image Segmentation, Journal of the Korean Institute of Communications and Information Sciences, The Journal of Korean Institute of Communications and Information Sciences, Vol. 44, No. 7, pp. 1402-1410, July 2019 (KCI).

## AWARD AND HONORS

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- Best paper award of Korea Multimedia Society Conference, 2022.
- Best paper award of The Institute of Electronics and Information Engineers Conference, 2021.
- Best paper award of paper/coding section of the 4th Industrial Revolution Competition, 2019.
- Best paper award of Korean Electric Association Industrial Electric Committee Conference, 2019.

- 2nd United Festival for the Promotion of Cultivating talent in the 4th Industrial Revolution (participation award) November 23, 2018.

## REFERENCES

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- References available upon request.  
Updated on the November 26, 2022.