

# Taeoh Kim

Ph. D. Student

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## CONTACT

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Github	<a href="https://github.com/taeoh-kim">https://github.com/taeoh-kim</a>
Lab	iMAGE and Video Pattern Recognition Lab (MVPLAB) Co-Working with Hyeongmin Lee and MyeongAh Cho. Advised by Prof. <b>Sangyoun Lee</b> <a href="http://mvp.yonsei.ac.kr">http://mvp.yonsei.ac.kr</a>
YouTube	<a href="https://www.youtube.com/channel/UCtfvbtV82UDr-vHnj5sPeGQ/">https://www.youtube.com/channel/UCtfvbtV82UDr-vHnj5sPeGQ/</a> <b>PR (Paper Reader) 12 Member: s1 ~ s3</b> <a href="https://www.youtube.com/playlist?list=PLIMkM4tgfjnJhhd4wn5aj8fVTYJwlpWkS">https://www.youtube.com/playlist?list=PLIMkM4tgfjnJhhd4wn5aj8fVTYJwlpWkS</a>

## RESEARCH INTERESTS

Computer Vision	Image/Video Restoration (Low-level Vision) Face Recognition, Object Detection and Tracking
Machine Learning	Deep Learning and Model Compression

## SKILLS

Languages	Python and C++
Frameworks	PyTorch, Tensorflow and OpenCV

## EDUCATION

Sep. 2014 – Present	<b>PH. D.</b> in Electrical and Electronic Engineering (GPA 4.23 / 4.3) <b>YONSEI UNIVERSITY</b> , Seoul, Korea
Mar. 2009 – Feb. 2015	<b>B.S.</b> in Electrical and Electronic Engineering (GPA 3.75 / 4.3) <b>YONSEI UNIVERSITY</b> , Seoul, Korea

## PUBLICATIONS

### Journal

Relational Deep Feature Learning for Heterogeneous Face Recognition  
Myeong Ah Cho, **Taeoh Kim**, Ig-Jae Kim and Sangyoun Lee  
IEEE Transactions on Information Forensics and Security (IEEE TIFS), *Under Review*

Sampling Operator to Learn the Scalable Correlation Filter for Visual Tracking  
Minkyu Lee, **Taeoh Kim**, Eungyeol Song, Yuseok Ban and Sangyoun Lee  
IEEE Access, 2019

### Conferences

Regularized Adaptation for Stable and Efficient Continuous-Level Learning on Image Processing Networks  
Hyeongmin Lee\*, **Taeoh Kim\***, Hanbin Son, Sangwook Baek, Minsu Cheon and Sangyoun Lee (\* Equal Contribution)  
*Tech Report, Arxiv, 2020*

AdaCoF: Adaptive Collaboration of Flows for Video Frame Interpolation  
Hyeongmin Lee, **Taeoh Kim**, Tae-young Chung, Daehyun Pak, Yuseok Ban and Sangyoun Lee  
IEEE International Conference on Computer Vision and Pattern Recognition (CVPR) 2020

SF-CNN: A Fast Compression Artifacts Removal via Spatial-to-Frequency Convolutional Neural Networks  
**Taeoh Kim**, Hyeongmin Lee, Hanbin Son and Sangyoun Lee  
IEEE International Conference on Image Processing (ICIP) 2019

NIR-to-VIS Face Recognition via Embedding Relations and Coordinates of the Pairwise Features  
Myeong Ah Cho, Tae-young Chung, **Taeoh Kim** and Sangyoun Lee  
IAPR International Conference on Biometrics (ICB) 2019

Lightweight Network for Face Recognition via Advanced Bottleneck Block  
Sungjun Jang, Yongju Lee, **Taeoh Kim** and Sangyoun Lee  
Domestic Conference, IEIE Korea Summer Conference, 2019

Face Landmark Detection using Gaussian Guided Regression Network  
Yongju Lee, **Taeoh Kim**, Taejae Jeon, Hanbyeol Bae and Sangyoun Lee  
International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC) 2019

CollaboNet: Collaboration of Generative Models by Unsupervised Classification  
Hyeongmin Lee, **Taeoh Kim**, Eungyeol Song and Sangyoun Lee  
IEEE International Conference on Image Processing (ICIP) 2018

Compressed Video Noise Sensitivity Analysis for Blocking Artifact Reduction  
Changhyun Park, **Taeoh Kim**, Hanbin Son, Kyungjae Lee, and Sangyoun Lee  
International Conference on Electronics, Information and Communication (ICEIC) 2018

Adaptive In-Loop Filtering for Ringing Artifact Reduction using Noise Level Prediction in HEVC  
Hanbin Son, Changhyun Park, **Taeoh Kim** and Sangyoun Lee  
International Conference on Electronics, Information and Communication (ICEIC) 2018

Video Flickering Artifact Suppression based on Spatiotemporal Guide Filter  
Hanbin Son, **Taeoh Kim**, Changhyun Park, Daehyun Pak and Sangyoun Lee  
Domestic Conference, KICS Korea Summer Conference, 2017

A Video Coding System based on Coefficient Modeling Considering Visual Artifact  
**Taeoh Kim**, Changhyun Park, Hanbin Son, and Sangyoun Lee  
International Conference on Electronics, Information and Communication (ICEIC) 2017

Pedestrian Detection using HOG, LBP and Color LBP  
Taejae Jeon, **Taeoh Kim**, Hyunhye Shin and Sangyoun Lee  
International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC) 2015

## PROJECTS

Sep. 2016 – Present

Emotional Intelligence Technology to Infer Human Emotion and Carry on Dialogue Accordingly  
**INSTITUTE FOR INFORMATION & COMMUNICATIONS TECHNOLOGY PROMOTION (IITP), MINISTRY OF SCIENCE**

May. 2019 – Dec. 2019

Locally Controllable DNN Algorithm Development  
**SAMSUNG ELECTRONICS CO. LTD.**

Apr. 2019

7<sup>th</sup> Place  
**UAV ERTI CHALLENGE, CVPR WORKSHOP, 2019**

Apr. 2018 – Dec. 2018

Development of Compact Deep Networks for Image Processing  
**SAMSUNG ELECTRONICS CO. LTD.**

Jul. 2015 – Aug. 2017

Development of Novel Coding Framework based on Video Processing Quality-Aware Modeling  
**SAMSUNG ELECTRONICS CO. LTD.**

Sep. 2014 – Dec. 2015

Development of Next Generation Digital TV Broadcasting System  
**INFORMATION TECHNOLOGY RESEARCH CENTER (ITRC), IITP, MINISTRY OF SCIENCE**

## AWARDS

Aug, 2015	Project « Tell-A-Byte » <b>1<sup>ST</sup> AWARD</b> – Global Entrepreneurship Camp Korea 2015 Operated by IITP Korea with Stanford University
Feb, 2015	<b>AWARDED THE HIGHEST HONERS</b> – Top 1%, 2014-2 <sup>nd</sup> Semester Undergraduate School, Yonsei University
Aug, 2014	<b>AWARDED HIGH HONERS</b> – Top 3%, 2014-1 <sup>st</sup> Semester Undergraduate School, Yonsei University
Feb, 2014	<b>AWARDED HONERS</b> – Top 10%, 2013-2 <sup>nd</sup> Semester Undergraduate School, Yonsei University

## EXPERIENCES

Present	Offline Study: SNU AI Study (Season 5, 6, 7)
Present	Online Study: Facebook Tensorflow-Korea PR-12 (Season 1, 2, 3) on <b>YouTube</b>
Mar. 2015 – Dec. 2017	<b>TEACHING ASSISTANCE</b> – School of EE, Yonsei University [2015-1] Digital Signal Processing, [2015-2] Signal and Systems [2016-2] Electrical & Electronic Engineering Experiments: Applications [2017-1] Electrical & Electronic Engineering Experiments: Applications [2017-2] Electrical & Electronic Engineering Experiments: Applications
Sep. 2013 – Jun. 2014	<b>Y.D.M.C. ALUMNI</b> – Yonsei University Dream Major Conductor Representative of Electrical & Electronic Engineering <a href="https://cafe.naver.com/ydmc">https://cafe.naver.com/ydmc</a>