TAEOH **KIM**

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Ph. D. Candidate in Yonsei University

Image and Video Pattern Recognition Lab.
School of Electrical and Electronic Engineering
Yonsei University, Seoul, South Korea
Thesis Advisor: Professor Sangyoun Lee

RESEARCH TOPICS

- Image/Video Recognition
- Image/Video Restoration/Enhancement
- Face Recognition
- Image Generation

SKILLS

- Python/C++
- Web Programming
- PyTorch, Tensorflow

EDUCATIONS

03/2015 – PRESENT

PH. D.

School of Electrical and Electronic Engineering, GPA 4.23 / 4.3
Yonsei University, Seoul, South Korea

03/2009 – 02/2015

B. S.

School of Electrical and Electronic Engineering, GPA 3.75 / 4.3
Yonsei University, Seoul, South Korea

PUBLICATIONS

Preprints

Enhanced Standard Compatible Image Compression Framework based on Auxiliary Codec Networks

Hanbin Son, **Taeoh Kim**, Hyeongmin Lee, Sangyoun Lee
Under Review: IEEE Transactions on Image Processing (IEEE TIP)

Regularized Adaptation for Stable and Efficient Continuous-Level Learning on Image Processing Networks

Hyeongmin Lee, **Taeoh Kim**, Hanbin Son, Sangwook Baek, Minsu Cheon, Sangyoun Lee
Arxiv Preprint
Equal Contribution

Journals

Relational Deep Feature Learning for Heterogeneous Face Recognition

MyeongAh Cho, **Taeoh Kim**, Ig-Jae Kim, Kyungjae Lee, Sangyoun Lee
IEEE Transactions on Information Forensics and Security (IEEE TIFS)
07/2020 Accepted

Sampling Operator to Learn the Scalable Correlation Filter for Visual Tracking

Minkyu Lee, **Taeoh Kim**, Sungyeol Song, Yuseok Ban, Sangyoun Lee
IEEE Access
01/2020 Published

Conferences

AIM 2020 Challenge on Image Extreme Inpainting

E. Ntavelis, ..., Chajin Shin, **Taeoh Kim**, Hanbin Son, Sangyoun Lee, ... (47 Authors)
European Conference on Computer Vision Workshop (ECCVW) 2020
Advances in Image Manipulation Workshop and Challenges
Challenge Report

Learning Temporally Invariant and Localizable Features via Data Augmentation for Video Recognition

Taeoh Kim, Hyeongmin Lee, MyeongAh Cho, Hoseong Lee, DongHeon Cho, Sangyoun Lee
European Conference on Computer Vision Workshop (ECCVW) 2020
1st Visual Inductive Priors for Data Efficient Deep Learning Workshop
Oral Presentation, Equal Contribution

Extrapolative-Interpolative Cycle-Consistency Learning for Video Frame Extrapolation

Sangjin Lee, Hyeongmin Lee, **Taeoh Kim**, Sangyoun Lee
IEEE International Conference on Image Processing (ICIP) 2020

AdaCoF: Adaptive Collaboration of Flows for Video Frame Interpolation

Hyeongmin Lee, **Taeoh Kim**, Tae-young Chung, Daehyun Pak, Yuseok Ban, Sangyoun Lee
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, 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**, Sangyoun Lee
IAPR International Conference on Biometrics (ICB) 2019
Oral Presentation

Face Landmark Detection using Gaussian Guided Regression Network
Yongju Lee, **Taeoh Kim**, Taejae Jeon, Hanbyeol Bae, 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, Sangyoun Lee
IEEE International Conference on Image Processing (ICIP) 2018

A Video Coding System based on Coefficient Modeling Considering Visual Artifact
Taeoh Kim, Changhyun Park, Hanbin Son, 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, Sangyoun Lee
International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC) 2015

Domestic Publications in Korea

Photorealistic Style Transfer with Adversarial Loss for Photo-to-Sketch Facial Image Synthesis
Rushuang Xu, MyeongAh Cho, **Taeoh Kim**, Sangyoun Lee
Summer Annual Conference of IEIE (대한전자공학회 하계종합학술대회), 2020

Semantic Segmentation using Class Distribution Information
Minjung Kim, Hyeongmin Lee, **Taeoh Kim**, Sangyoun Lee
Summer Annual Conference of IEIE (대한전자공학회 하계종합학술대회), 2020

Lightweight Network for Face Recognition via Advanced Bottleneck Block
Sungjun Jang, Yongju Lee, **Taeoh Kim**, Sangyoun Lee
Summer Annual Conference of IEIE (대한전자공학회 하계종합학술대회), 2019

Video Flickering Artifact Suppression based on Spatiotemporal Guide Filter
Hanbin Son, **Taeoh Kim**, Changhyun Park, Daehyun Pak, Sangyoun Lee
KICS Summer Conference (한국통신학회 하계종합학술대회), 2017

PROJECTS

05/2019 – 12/2019
Locally Controllable DNN Algorithm Development
Samsung Research

04/2018 – 12/2018
Development of Compact Deep Networks for Image Processing
Samsung Research

07/2015 – 08/2017
Development of Novel Coding Framework based on Video Processing Quality-Aware Modeling
Samsung Research

09/2014 – 12/2015
Development of Next Generation Digital TV Broadcasting System
Information Technology Research Center (ITRC), Ministry of Science, Republic of Korea

AWARDS

08/2020
2ND PLACE
Image Extreme Inpainting Challenge Track 1: Classic Inpainting
Advances in Image Manipulation (AIM) 2020 Workshop
European Conference on Computer Vision (ECCV) Workshop

08/2020
4TH PLACE
Visual Inductive Priors for Data-Efficient Action Recognition Challenge
1st Visual Inductive Priors (VIPriors) for Data-Efficient Deep Learning Workshop
European Conference on Computer Vision (ECCV) Workshop

04/2019
7TH PLACE
Embedded Real-Time Infrence Challenge
3rd International Workshop on Computer Vision for UAVs
Conference on Computer Vision and Pattern Recognition (CVPR) Workshop

08/2020
1ST PLACE, PROJECT "TELL-A-BYTE"
Competition in Global Entrepreneurship Camp Korea 2015
Operated by IITP Korea and Stanford University

TALKS (IN KOREAN)

CUBOX INC.

- Deep Feature Learning for Face Recognition

PR12 SEASON 3

Youtube Deep Learning Study at Tensorflow-Korea Facebook Group

- Momentum Contrast for Unsupervised Visual Representation Learning, https://youtu.be/2Undxq7jlsA
- Semantic Pyramid for Image Generation, https://youtu.be/b1xoR4utQ3k
- Zero-shot Super-Resolution using Deep Internal Learning, https://youtu.be/WwuHjgTwCR0
- Learning Correspondence from the Cycle-Consistency of Time, https://youtu.be/5g8-8Hz5x08
- A Closer Look at Few Shot Classification, https://youtu.be/yyqZ1K5u2_8

SNU AI STUDY SEASON 7

- Deep Feature Learning for Face Recognition

PR12 SEASON 2

Youtube Deep Learning Study at Tensorflow-Korea Facebook Group

- MoCoGAN: Decomposing Motion and Content for Video Generation, https://youtu.be/9uNFtnRa_JU
- Semi-Supervised Classification with Graph Convolutional Networks, https://youtu.be/uqBsvoOY8jM
- CNN Attention Networks, https://youtu.be/Dvi5_YC8Yts
- ImageNet-trained CNNs are Biased Towards Textures, https://youtu.be/oBapZTL8LsE
- Fully-Convolutional Siamese Networks for Object Tracking, https://youtu.be/dv5yUl6Lw1g
- FaceNet: A Unified Embedding for Face Recognition and Clustering, https://youtu.be/0k3X-9y_9S8
- The Perception Distortion Tradeoff, https://youtu.be/6Yid4dituqo
- Visualizing Data using t-SNE, https://youtu.be/zpJwm7f7EXs

SNU AI STUDY SEASON 6

- Robustness of CNN

SNU AI STUDY SEASON 5

- The Perception Distortion Tradeoff

PR12 SEASON 1

Youtube Deep Learning Study at Tensorflow-Korea Facebook Group

- Taskonomy: Disentangling Task Transfer Learning, https://youtu.be/WjUGrzBIDv0
- Non-local Neural Networks, https://youtu.be/ZM153wo3baA
- Deep Compression, https://youtu.be/9mFZmpIbMDs
- Mask R-CNN, https://youtu.be/RtSZALC9DlU
- Fully Convolutional Networks for Semantic Segmentation & DeepLabs, https://youtu.be/JiC78rUF4iI

OTHER EXPERIENCES

REVIEWER

- Digital Signal Processing

ORGANIZER

- SNU (Seoul National University) AI Study

YOUTUBE

- **614 Subscribers** (08/2020)
- Including Presentations at PR12: Deep Learning Paper Readers
- Link: https://www.youtube.com/channel/UCtfvbtV82UDr-vHnj5sPeGQ/

TEACHING ASSISTANT @ YONSEI UNIVERSITY

- Fall 2017: Electrical & Electronic Engineering Experiments: Applications
- Spring 2017: Electrical & Electronic Engineering Experiments: Applications
- Fall 2016: Electrical & Electronic Engineering Experiments: Applications
- Fall 2015: Signal and Systems
- Spring 2015: Digital Signal Processing

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