Taeoh Kim

Research Scientist
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RESEARCH INTERESTS

- Video Understanding
- Computer Vision
- Representation Learning

EDUCATION

Mar. 2015 ~ Aug. 2021	**Yonsei University** School of Electrical and Electronic Engineering *Integrated Master and Ph.D. Course* *Advisor: Sangyoun Lee* *Ph.D. in Electrical and Electronic Engineering*	Seoul, Korea
Mar. 2009 ~ Feb. 2015	**Yonsei University** School of Electrical and Electronic Engineering *B.S. in Electrical and Electronic Engineering*	Seoul, Korea

RESEARCH EXPERIENCES

- Research Scientist at Clova, NAVER Corp., Korea (Aug. 2021 ~ Present)

- Research Intern at Clova, NAVER Corp., Korea (Dec. 2020 ~ Jun. 2021) / Working with Minho Shim, Jinhyung Kim, and Dongyoon Wee

- Part-time Lecturer at CUBOX Inc., Korea (Aug. 2020 ~ Aug. 2021) / Face Recognition and Face Anti-Spoofing

- Graduate Student Researcher at Image and Video Pattern Recognition Lab., Yonsei University, Korea (Mar. 2015 ~ Aug. 2021) / Research on Image/Video Compression and Restoration, Face Recognition, and Video Understanding

- Undergraduate Intern at Image and Video Pattern Recognition Lab., Yonsei University, Korea (Aug. 2014 ~ Feb. 2015) / Research on Video Compression

JOURNALS (SCIE/ESCI)

1. MyeongAh Cho,**Taeoh Kim**,Woo Jin Kim,Suhwan Cho,Sangyoun Lee, "Unsupervised Video Anomaly Detection via Normalizing Flows with Implicit Latent Features", *PATTERN RECOGNITION*, (2022)

2. **Taeoh Kim**, Sangyoun Lee, "Geometry-Aware Deep Video Deblurring via Recurrent Feature Refinement", *IEEE TRANSACTIONS ON IMAGE PROCESSING*, (2022)

3. Hanbin Son, **Taeoh Kim**, Hyeongmin Lee, Sangyoun Lee, "Enhanced Standard Compatible Image Compression Framework based on Auxiliary Codec Networks", *IEEE TRANSACTIONS ON IMAGE PROCESSING*, (2022)

4. **Taeoh Kim**, Chajin Shin, Sangjin Lee, Sangyoun Lee, "Block-Attentive Subpixel Prediction Networks for Computationally Efficient Image Restoration", *IEEE ACCESS*, (2021)

5. MyeongAh Cho, **Taeoh Kim**, Ig-Jae Kim, Kyungjae Lee, Sangyoun Lee, "Relational Deep Feature Learning for Heterogeneous Face Recognition", *IEEE TRANSACTIONS ON INFORMATION FORENSICS AND SECURITY*, (2021)

6. Minkyu Lee, **Taeoh Kim**, Yuseok Ban, Eungyeol Song, Sangyoun Lee, "Sampling Operator to Learn the Scalable Correlation Filter for Visual Tracking", *IEEE ACCESS*, (2019)

CONFERENCES

1. Chajin Shin, **Taeoh Kim**, Sangjin Lee, Sangyoun Lee, "Test-Time Adaptation for Out-of-distributed Image Inpainting", International Conference on Image Processing (ICIP) 2021

2. **Taeoh Kim***, Hyeongmin Lee*, MyeongAh Cho*, Ho Seong Lee, Dong Heon Cho, Sangyoun Lee, "Learning Temporally Invariant and Localizable Features via Data Augmentation for Video Recognition.", ECCV Workshops 2020 (* Equal Contribution)

3. Evangelos Ntavelis, Andrés Romero, Siavash Bigdeli, Radu Timofte, Zheng Hui, Xiumei Wang, Xinbo Gao, Chajin Shin, **Taeoh Kim**, Hanbin Son, Sangyoun Lee, Chao Li, Fu Li, Dongliang He, Shilei Wen, Errui Ding, Mengmeng Bai, Shuchen Li, Yu Zeng, Zhe Lin, Jimei Yang, Jianming Zhang, Eli Shechtman, Huchuan Lu, Weijian Zeng, Haopeng Ni, Yiyang Cai, Chenghua Li, Dejia Xu, Haoning Wu, Yu Han, S. M. Nadim Uddin, Hae Woong Jang, Soikat Hasan Ahmed, Jungmin Yoon, Yong Ju Jung, Chu-Tak Li, Zhi-Song Liu, Li-Wen Wang, Wan-Chi Siu, Daniel Pak-Kong Lun, Maitreya Suin, Kuldeep Purohit, A. N. Rajagopalan, Pratik Narang, Murari Mandal, Pranjal Singh Chauhan, "AIM 2020 Challenge on Image Extreme Inpainting.", ECCV Workshops 2020

4. Sangjin Lee, Hyeongmin Lee, **Taeoh Kim**, Sangyoun Lee, "Extrapolative-Interpolative Cycle-Consistency Learning For Video Frame Extrapolation.", International Conference on Image Processing (ICIP) 2020

5. Hyeongmin Lee, **Taeoh Kim**, Tae-Young Chung, Daehyun Pak, Yuseok Ban, Sangyoun Lee, "AdaCoF: Adaptive Collaboration of Flows for Video Frame Interpolation.", CVPR 2020

6. MyeongAh Cho, Tae-Young Chung, **Taeoh Kim**, Sangyoun Lee, "NIR-to-VIS Face Recognition via Embedding Relations and Coordinates of the Pairwise Features.", International Conference on Biometrics (ICB) 2019 (Oral)

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

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

9. Hyeongmin Lee, **Taeoh Kim**, Eungyeol Song, Sangyoun Lee, "Collabonet: Collaboration of Generative Models by Unsupervised Classification.", International Conference on Image Processing (ICIP) 2018

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

PATENTS

1. LEE, Sang Youn, **KIM, Tae Oh**, SON, Han Bin, LEE, Hyeong Min, "Apparatus for Compressing Image, Learning Apparatus and Method Thereof", KR-Registration No. 10-2245682-0000

2. LEE, Sang Youn, LEE, Hyeong Min, **KIM, Tae Oh**, "Apparatus and method for interpolating frames based on multiple flows", KR-Registration No. 10-2201297-0000

PROJECTS

- Locally Controllable DNN Algorithm Development, Samsung Research, Korea / Project Leader (May. 2019 ~ Dec. 2019)

- Development of Compact Deep Networks for Image Processing, Samsung Research, Korea / Project Leader (Apr. 2018 ~ Dec. 2018)

- Development of Novel Coding Framework based on Video Processing Quality-Aware Modeling, Samsung Research, Korea / Project Leader (Jul. 2015 ~ Aug. 2017)

- Development of Next Generation Digital TV Broadcasting System, Information Technology Research Center (ITRC), Ministry of Science, Korea / Project Leader (Sep. 2014 ~ Dec. 2015)

AWARDS AND HONORS

- 2nd Place, Image Extreme Inpainting Challenge Track 1: Classic Inpainting, Advances in Image Manipulation (AIM) 2020 Workshop, ECCV 2020, United Kingdom (Aug. 2020)

- 4th Place, Visual Inductive Priors for Data-Efficient Action Recognition Challenge, 1st Visual Inductive Priors (VIPriors) for Data-Efficient Deep Learning Workshop, ECCV 2020, United Kingdom (Aug. 2020)

- 7th Place, Embedded Real-Time Inference Challenge, 3rd International Workshop on Computer Vision for UAVs, CVPR 2019, United States (Jun. 2019)

- 1st Place, "Tell-A-Byte", Competition in Global Entrepreneurship Camp Korea, IITP Korea and Stanford University, Korea (Aug. 2015)

- National Science & Technology Scholarship, KOSAF, Korea (Mar. 2009 ~ Feb. 2015)

ACADEMIC SERVICES

- Conference Reviewer
  - CVPR 2022, ECCV 2022, ICIP 2022
- Journal Reviewer
  - IEEE Transactions on Industrial Informatics (IEEE TII)
  - Digital Signal Processing (DSP)
  - Neurocomputing

OTHER EXPERIENCES

- Talks
  - 19 Presentations at PR12 YouTube Channel
- Organizer
  - SNU AI Study (Season 7~10)
- Teaching Assistant
  - Digital Signal Processing (2015 Spring)

- Signal and Systems (2015 Fall)
- Advanced EE Experiments (2016 Fall)
- Advanced EE Experiments (2017 Spring)
- Advanced EE Experiments (2017 Fall)
- Junior Seminar: Deep Learning for Visual Recognition (2020 Fall)