

# Taeoh Kim

Research Engineer / Tech Lead.  
CLOVA, NAVER Cloud Corp.  
taeoh.kim@navercorp.com  
<https://taeoh-kim.github.io>

## RESEARCH INTERESTS

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- Visual Representation Learning
- Video Understanding

## EXPERIENCES

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- Research Engineer / Tech Lead. at CLOVA, NAVER Cloud Corp., Korea (Jan. 2023 ~ Present)
- Research Engineer at CLOVA, NAVER Corp., Korea (Aug. 2021 ~ Dec. 2022)
- Research Intern at Clova, NAVER Corp., Korea (Dec. 2020 ~ Jun. 2021) / Video Team, Working with Minhoo Shim, Jinhyung Kim, and Dongyoon Wee
- 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
- Part-time Lecturer at CUBOX Inc., Korea (Aug. 2020 ~ Aug. 2021) / Face Recognition and Face Anti-Spoofing

## EDUCATION

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Mar. 2015 ~ Aug. 2021	<b>Yonsei University</b> School of Electrical and Electronic Engineering <i>Advisor: Sangyoun Lee</i> <i>Ph.D. in Electrical and Electronic Engineering</i>	Seoul, Korea
Mar. 2009 ~ Feb. 2015	<b>Yonsei University</b> School of Electrical and Electronic Engineering <i>B.S. in Electrical and Electronic Engineering</i>	Seoul, Korea

## CONFERENCES

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1. **Taeoh Kim**, Jinhyung Kim, Minhoo Shim, Sangdoo Yun, Myunggu Kang, Dongyoon Wee, Sangyoun Lee, "Exploring Temporally Dynamic Data Augmentation for Video Recognition", **ICLR 2023** (Notable Top 25%)
2. Jinhyung Kim, **Taeoh Kim**, Minhoo Shim, Dongyoon Han, Dongyoon Wee, Junmo Kim, "Frequency Selective Augmentation for Video Representation Learning", **AAAI 2023**
3. Chajin Shin, **Taeoh Kim**, Sangjin Lee, Sangyoun Lee, "Test-Time Adaptation for Out-of-

distributed Image Inpainting", International Conference on Image Processing (ICIP) 2021

4. **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) (Oral Presentation)**
5. Evangelos Ntavelis, Andrés Romero, Siavash Bigdeli, Radu Timofte, Zheng Hui, Xiumei Wang, Xinbo Gao, Chajin Shin, **Taeoh Kim**, Hanbin Son, Sangyoun Lee, et al., "AIM 2020 Challenge on Image Extreme Inpainting.", **ECCV Workshops 2020**
6. Sangjin Lee, Hyeongmin Lee, **Taeoh Kim**, Sangyoun Lee, "Extrapolative-Interpolative Cycle-Consistency Learning For Video Frame Extrapolation.", International Conference on Image Processing (ICIP) 2020
7. Hyeongmin Lee, **Taeoh Kim**, Tae-Young Chung, Daehyun Pak, Yuseok Ban, Sangyoun Lee, "AdaCoF: Adaptive Collaboration of Flows for Video Frame Interpolation.", **CVPR 2020**
8. 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 Presentation**)
9. **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
10. 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
11. Hyeongmin Lee, **Taeoh Kim**, Eungyeol Song, Sangyoun Lee, "Collabonet: Collaboration of Generative Models by Unsupervised Classification.", International Conference on Image Processing (ICIP) 2018
12. **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

## JOURNALS (SCIE/ESCI)

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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)

## PATENTS

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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

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- 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

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- 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

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- Conference Reviewer
  - CVPR 2022, 2023
  - ICCV 2023
  - AAAI 2023
  - ECCV 2022
  - ICIP 2022, 2023
- Journal Reviewer
  - IEEE Transactions on Circuits and Systems for Video Technology (IEEE TCSVT)
  - IEEE Transactions on Industrial Informatics (IEEE TII)
  - Digital Signal Processing (DSP)
  - Artificial Intelligence Review (AIRE)
  - Neurocomputing

## OTHER EXPERIENCES

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- 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)