Eungyeup Kim

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INTERESTS Robust ML under distribution shifts, Computer vision, Dataset bias, Self-supervised learning.

EDUCATION

Carnegie Mellon University

Ph.D. in Computer Science   Sep 2022 – Present
- Advisor: Prof. Matt Fredrikson

Korea Advanced Institute of Science and Technology (KAIST)

M.S. in Artificial Intelligence   Mar 2020 – Aug 2021
- Advisor: Prof. Jaegul Choo

Hanyang University

B.S. in Electronic Engineering   Mar 2013 – Aug 2019

PUBLICATIONS CONFERENCES

[1] Jungsoo Lee*, **Eungyeup Kim***, Juyoung Lee, Jihyeon Lee, and Jaegul Choo, "Learning Debiased Representation via Disentangled Feature Augmentation," in *Conference on Neural Information Processing Systems (NeurIPS), 2021, Oral Presentation* (<1% acceptance rate). (*: equal contribution) [paper] [code]

[2] **Eungyeup Kim***, Jihyeon Lee*, and Jaegul Choo, "BiaSwap: Removing Dataset Bias with Bias-Tailored Swapping Augmentation," in *IEEE International Conference on Computer Vision (ICCV)*, 2021. (*: equal contribution) [paper]

[3] **Eungyeup Kim***, Sanghyeon Lee*, Jeonghoon Park*, Somi Choi, Choonghyun Seo, and Jaegul Choo, "Deep Edge-Aware Interactive Colorization against Color Bleeding Effects," in *IEEE International Conference on Computer Vision (ICCV), 2021, Oral Presentation* (3% acceptance rate). (*: equal contribution) [paper] [project]

[4] Junsoo Lee*, **Eungyeup Kim***, Yunsung Lee, Dongjun Kim, Jaehyuk Chang, and Jaegul Choo, "Reference-Based Sketch Image Colorization using Augmented-Self Reference and Dense Semantic Correspondence," in *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020. (*: equal contribution) [paper] [project]

[5] Wonwoong Cho*, Kangyeol Kim*, **Eungyeup Kim**, Hyunwoo Kim, and Jaegul Choo, "Unpaired Image Translation via Adaptive Convolution-based Normalization," in *arXiv preprint arXiv: 1911.13271*, 2019. (*: equal contribution) [paper]

RESEARCH EXPERIENCE

AI Lab, Kakao Enterprise Corp.

Research Scientist   May 2021 – Present
- Conducted research on feature-level data augmentation for debiasing.
- Published a debiasing paper at *NeurIPS 2021 (Oral presentation)* [1].

Data and Visual Analytics Lab, KAIST

Graduate Student   Sep 2019 – Aug 2021
- Conducted research on data augmentation via generative models for debiasing.
- Published a debiasing paper at *ICCV 2021* [2].

AI Research, Naver Webtoon Corp.

Collaborative Researcher   Sep 2019 – Nov 2020
- Conducted collaborative research on sketch colorization and edge-aware colorization.
- Published two colorization papers at *CVPR 2020* and *ICCV 2021 (Oral presentation)* [3, 4].

SCHOLARSHIPS KAIST Support Scholarship, KAIST   Mar 2020 – Aug 2021

Academic Excellence Scholarship, Hanyang University   Sep 2016 – Dec 2018

Freshman Scholarship, Hanyang University   Mar 2013

INVOLVEMENTS & ACTIVITIES	**Invited talk**, SNU AIIS Retreat 2022
	• Presented on "Learning debiased representation." [1] Apr 2022

INVOLVEMENTS & ACTIVITIES

Invited talk, SNU AIIS Retreat 2022
- Presented on "Learning debiased representation." [1] — Apr 2022

Invited talk, NeurIPS 2021 Social: ML in Korea
- Presented on "Learning debiased representation." [1] — Dec 2021

Invited talk, Hyundai Motor Group AI Research Seminar
- Presented on "Sketch colorization" [4] and "Unsupervised colorization." — Jun 2020, Oct 2020

Tutorial, Samsung DS AI Expert Program
- Presented on "Image-to-image translation." — Aug 2020

Tutorial, NVIDIA AI Conference
- Presented on "Image classification and object detection." — Aug 2018, Jul 2019

LANGUAGES

Korean: Native language.

English: Fluent.
- IBT TOEFL: 101 (Reading: 28, Listening: 26, Speaking: 23, Writing: 24)
- GRE: Verbal (154, 63%), Quantitative (169, 94%), Writing (3.5, 37%)

SKILLS

LaTeX, Python, PyTorch, TensorFlow, MATLAB, C++

LEADERSHIP EXPERIENCE

ML/DL Paper Study, Data and Visual Analytics Lab, KAIST
Team Leader — Dec 2019 – Aug 2021
- Led paper study group of 10 graduate students in topics of both machine learning and deep learning.

Hanyang International Volunteer Association (HIVA), International Affairs, Hanyang University
Leader — Jun 2016 – Dec 2018
- Organized mentoring program for international students for 4 consecutive semesters.

REFERENCES

Matt Fredrikson
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