# **Eungyeup Kim**

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### SUMMARY

Passionate computer vision researcher with the ability to apply recent deep generative methods to deliver desired results. With background in image-to-image translation and learning robust neural networks against bias, 1 paper is accepted in CVPR'20 and 3 papers are under-reviewed in top-tier AI conferences.

### **EDUCATION**

## Korea Advanced Institute of Science and Technology (KAIST)

Daejeon, Korea

Candidate for Master of Science in Artificial Intelligence

Mar 2020 – Expected June 2021

Cumulative GPA: 3.76 / 4.3

• Relevant Coursework: --- Machine Learning for AI(AI501), Deep Learning(AI502), Deep Learning for Natural Language Processing(AI605), Interpretability and Interactivity in AI(AI702), Programming for AI(AI504), Deep Learning for Computer Vision(AI604), Bayesian Machine Learning(AI701)

## **Hanyang University**

Seoul, Korea Mar 2013 – Feb 2019

Bachelor of Science in Electronic Engineering

Cumulative GPA: 3.78 / 4.5

# SKILLS

Programming/Scripting Languages: (Proficient) Pytorch, Python; (Familiar) TensorFlow, MATLAB, C++

### RESEARCH & PROJECT EXPERIENCE

## Vision AI, Kakao Enterprise, Korea

Research Intern

May 2021 – Present

- Researched on learning de-biased representation by leveraging feature-level augmentation via disentangled representations of intrinsic and bias attributes.
- Submitted paper at one of the top-tier AI conferences (W1 in publications)

#### Davian Lab, Korea

Collaborative Researcher

Dec 2020 – Apr 2021

- Researched on learning de-biased representation by augmenting bias-conflict images via bias-tailored image-to-image translation.
- Submitted paper at one of the top-tier AI conferences (W3 in publications)

## Naver Webtoon AI, Korea

Collaborative Researcher

Sep 2019 – Nov 2020

- Researched on human-machine interactive deep neural networks in image colorization for improving color-bleeding artifacts along the edges
- Researched on reference-based sketch image colorization via learning dense semantic correspondence between sketch and reference image
- Submitted papers at one of the top-tier AI conferences (C1 and W2 in publications)

#### Fassker, Korea

Collaborative Researcher

Jun 2020 – Apr 2021

- Researched on fashion style image classification and retrieval using real-user images collected from fashion shopping application
- Achieved over 85% classification accuracy on abstract styles of fashion images, such as minimal and kitch

## **National IT Industry Promotion Agency**

Aug 2019 – Dec 2019

- Researched on image translation for Virtual Try-On task
- An aim is to robustly transfer target clothing image onto reference person
- Explored related studies, such as state of the arts in generative adversarial networks and cloth-agnostic person representation

## **PUBLICATION**

### PEER-REVIEWED PUBLICATIONS

C1 J. Lee\*, E. Kim\*, Y. Lee, D. Kim, J. Chang, J. Choo. "Reference-Based Sketch Image Colorization using Augmented-Self Reference and Dense Semantic Correspondence," IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2020, Seattle, WA, Accepted, (\*indicates equal contributions)

#### **PREPRINTS**

**W1** E. Kim\*, J. Lee\*, J. Lee, J. Choo. "Learning Debiased Representation via Disentangled Feature Augmentation," Under review (\*indicates equal contributions)

W2 E. Kim\*, S. Lee\*, J. Park\*, S. Choi, C. Seo, J. Choo. "Deep Edge-Aware Interactive Colorization against Color Bleeding Effects," Under review (\*indicates equal contributions)

W3 E. Kim\*, J. Lee\*, J. Choo. "BiaSwap: Removing Dataset Bias with Bias-Tailored Swapping Augmentation," Under review (\*indicates equal contributions)

W4 W. Cho\*, K. Kim\*, E. Kim, H. Kim, J. Choo. "Unpaired Image Translation via Adaptive Convolution-based Normalization," arxiv.org/abs/1911.13271, (\*indicates equal contributions)

### LEADERSHIP EXPERIENCE

Leader, DAVIAN Study Club, KAIST

Dec 2017 - Present

• Ran KAIST study group with 10 graduate students to obtain basic knowledge and wide range of deep learning and machine learning background knowledge

Executive, Hanyang International Volunteer Club (HIVA), Hanyang University

June 2016 - Dec 2018

- Organized new creative volunteer programs for Korean and International students
- Supervised university's official mentoring program for exchange students for 4 consecutive semesters

### ACTIVITIES AND INVOLVEMENT

Invited Talk at Kakao Enterprise AI Group Seminar, Jun 2021

- Presented on paper "Learning Debiased Representation via Disentangled Feature Augmentation" (W1 in publication) Invited Talk at Hyundai Motor Group AI Research Seminar, *Jun 2020 & Oct 2020* 
  - Presented on paper "Reference-Based Sketch Image Colorization using Augmented-Self Reference and Dense Semantic Correspondence" (C1 in publication)
  - Introduced overview of image-to-image translation and presented on paper "Exploring Unlabeled Faces for Novel Attribute Discovery"

Samsung DS AI Expert Program Instructor, Aug 2020

- Instructed both theoretical backgrounds and implementation details of image-to-image translation baselines NVIDIA AI Conference Instructor, *Aug 2018 & Jul 2019* 
  - Instructed *Deep Learning Institute Workshop* (deep learning, computer vision and natural language processing) for two consecutive years