

JEONGHOON PARK

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RESEARCH INTERESTS

Responsible AI, Bias Mitigation, Fairness

My research focuses on responsible AI, with a particular emphasis on bias mitigation. I have explored debiasing tasks in classification models and recently expanded my interests to address societal bias in models trained with large-scale datasets, especially diffusion-based text-to-image (T2I) generative models. This research is essential as generative models increasingly shape various applications and influence societal perceptions. My research goal is to develop methodologies that ensure fairness and minimize bias in real-world systems, advancing responsible AI by providing effective bias mitigation solutions across traditional classification and cutting-edge generation tasks.

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST)

Seongnam, Korea

GPA 3.78/4.3 (Present)

Mar. 2022 - Present

Master and PhD Integrated Course of Department of Artificial Intelligence

Data and Visual Analysis Lab (DAVIAN)

Advisor: Prof. Jaegul Choo

Korea Advanced Institute of Science and Technology (KAIST)

Seongnam, Korea

GPA 3.83/4.3

Mar. 2020 - Feb. 2022

Master of Department of Artificial Intelligence

Data and Visual Analysis Lab (DAVIAN)

Advisor: Prof. Jaegul Choo

Korea University

Seoul, Korea

GPA 4.4/4.5

Mar. 2015 - Feb. 2020

Bachelor of Department of Computer Science

Bachelor of Information Security(Relation Major)

PUBLICATIONS AND PREPRINTS

Enhancing Intrinsic Features for Debiasing via Investigating Class-Discerning Common Attributes in Bias-Contrastive Pair

Jeonghoon Park*, Chaeyeon Chung*, Juyoung Lee, Jaegul Choo

IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2024

BiasEnsemble: Revisiting the Importance of Amplifying Bias for Debiasing

Jungsoo Lee*, **Jeonghoon Park***, Daeyoung Kim*, Juyoung Lee, Edward Choi, Jaegul Choo

AAAI Conference on Artificial Intelligence (AAAI), 2023

Accepted as Oral Presentation (19.6% acceptance rate)

Training auxiliary prototypical classifiers for explainable anomaly detection in medical image segmentation

Wonwoo Cho, **Jeonghoon Park**, Jaegul Choo

Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision(WACV), 2023

Deep Edge-Aware Interactive Colorization against Color-Bleeding Effects

Eungyeup Kim*, Sanghyeon Lee*, **Jeonghoon Park***, Somi Choi, Choonghyun Seo, Jaegul Choo

IEEE International Conference on Computer Vision (ICCV), 2021

Accepted as Oral Presentation (3% acceptance rate)

Natural Attribute-based Shift Detection

Jeonghoon Park*, Jimin Hong*, Radhika Dua*, Daehoon Gwak, Yixuan Li, Jaegul Choo, Edward Choi

ArXiv, 2021

Evaluation of Out-of-Distribution Detection Performance of Self-Supervised Learning in a Controllable Environment

Jeonghoon Park*, Kyungmin Jo*, Daehoon Gwak*, Jimin Hong, Jaegul Choo, Edward Choi

NeurIPS 2020 Workshop: Self-Supervised Learning - Theory and Practice

AWARDS AND HONORS

Graduation with Great Honor, Korea University

Feb. 2020

Third Place in Graduation Project Competition, Korea University

Jun. 2018

Advised by Professor Jaewoo-Kang and Ph.D student Wonjin-Yoon

Alzheimer's disease diagnosis using Machine Learning

Academic Excellence Award, Korea University *2016 Spring, 2016 Fall, 2017 Fall, 2018 Spring*

Semester High Honors, Korea University *2015 Spring, 2015 Fall, 2016 Spring, 2016 Fall, 2017 Fall, 2018 Spring, 2019 Fall*

INTERNSHIPS

Research Internship at Kakao Enterprise

Aug. 2022 - Nov. 2022

Conducted research on debiasing classification models

Lab Internship at Data Mining and Information Systems Laboratory, Korea University

Mar. 2018 - Jan. 2019

Participated in bioinformatics project about Alzheimer's disease

Lab Internship at Hyper Media Laboratory, Korea University

Nov. 2016 - Apr. 2019

studied quantum computing algorithm and semantic web

SCHOLARSHIPS

The National Scholarship for Science and Engineering

2017 Fall - 2019 Fall

This scholarship supports undergraduates with strong academic performance in science and engineering, with the purpose of developing future leaders in those fields.

KU undergraduate researcher program

Jun. 2018 - Nov. 2018

This is program-based scholarship in Korea University. It helps students to discover and define their own research subjects by providing them with personal research opportunities. I studied reading and writing method on Semantic web with linked data for inexpert people.