Minjeong Park

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Research Interests

My research interests lie in the field of computer vision, machine learning, and its applications. Most recently, my research focuses on two main directions: **(1) Ensuring robustness to distribution changes and unknown categories for real-world scenarios** and **(2) Developing an innovative vision algorithm to address diverse challenges across the representations in 2D and 3D**.

Education

Yonsei University *Seoul, Korea*
M.S. *in Electrical and Electronic Engineering* *Aug 2024*

- Advised by Prof. Sangyoun Lee
- Thesis: Pedestrian Attribute Recognition via Text-guided Semantic Representation

Kyung Hee University *Seoul, Korea*
B.S. *in Computer Science and Engineering* *Aug 2022*

Research Experience

Korea University *Seoul, Korea*
Research Assistant, Vision & AI Lab *Aug 2024 – Present*

- Advised by Prof. Jinkyu Kim
- Designed person retrieval networks leveraging open-vocabulary person attribute recognition.
- Developed an efficient visual SLAM model to improve convergence rates and enhance reconstruction quality.

Korea Institute of Science and Technology (KIST) *Seoul, Korea*
Student Researcher, Center for Artificial Intelligence *Sep 2022 – Jul 2024*

- Advised by Dr. Heeseung Choi
- Designed person re-identification and pedestrian attribute recognition algorithms to enhance robustness in real-world scenarios.

Yonsei University *Seoul, Korea*
Graduate Research Assistant, Image and Video Pattern Recognition Lab *Sep 2022 – Aug 2024*

- Designed attribute recognition networks to improve OOD robustness.

Kyung Hee University *Seoul, Korea*
Undergraduate Research Assistant, Visual and Media Lab *Mar 2021 – Aug 2022*

- Developed a neural image compression algorithm by implementing block-based adaptive resizing.

Laon People (Global ICT Internship Program) *San Jose, CA*
Research Intern, AI Traffic Solution Team *Jul 2021 – Aug 2021*

- Trained deep learning-based vehicle tracking model.
- Built upgraded tracking algorithm for occluded vehicles.

Publications

LRSLAM: Low-rank Representation of Signed Distance Fields in Dense Visual SLAM System
Hongbeen Park, **Minjeong Park**, Giljoo Nam, Jinkyu Kim*
*European Conference on Computer Vision (**ECCV**), 2024*

Person Retrieval with Open Vocabulary Attribute Recognition Through Region Understanding
Minjeong Park, Hongbeen Park, Jinkyu Kim*
arXiv Preprint

ViTA-PAR: One-to-One Visual and Textual Alignment for Pedestrian Attribute Recognition
Minjeong Park, Hongbeen Park, Jinkyu Kim*
arXiv Preprint

Multi-Attention based Pedestrian Attribute Recognition with Learnable Multimodal Prompts
Minjeong Park, Sangyoun Lee, Ik-Jae Kim, Heeseung Choi*
(Domestic) Proceedings of IEIE, 2024

Neural Image Compression using Block based Adaptive Resizing
Minjeong Park, Yeongwoong Kim, Donghyun Kim, Sung Chang Lim, Hui Yong Kim*
(Domestic) Proceedings of the Korean Society of Broadcast Engineers Conference, 2022

Patents

METHOD AND APPARATUS FOR ENCODING/DECODING IMAGE AND STORAGE MEDIUM FOR STORING BITSTREAM Jun 2023
Korea, 1020230074338
PCT/KR2023/007985

Honors & Awards

Fully Funded Scholarship Sep 2022 - Aug 2024
Yonsei University
Scholarship

Yonsei Graduate Fellowship Sep 2022 - Aug 2023
Yonsei University
Scholarship

3rd place in Silicon Valley Software Technology and Innovation Program Feb 2021
San Jose State University
Award

SW College Project Scholarship Sep 2020, Sep 2021
Kyung Hee University
Scholarship

External Affair Supporters Scholarship Mar 2021 - Feb 2022
Kyung Hee University
Scholarship

Skills

Programming Language: Python, C/C++, C, Swift, JavaScript

Tools: Pytorch, TensorFlow, OpenCV, Matplotlib, React, mongoDB