Woojung Han

Ph.D. Candidate @ MICV Lab, YONSEI

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Profile

Passionate AI researcher specializing in computer vision with a strong focus on advancing the field through innovative research. Proficient in Python for coding and experienced in leveraging deep learning techniques for image analysis and understanding. Currently pursuing graduate studies with a keen interest in applying reinforcement learning to enhance vision-based systems. Actively engaged in reading, analyzing, and contributing to cutting-edge research papers. Seeking opportunities to contribute expertise and drive advancements in computer vision technology. Take good care of me. :)

Education

Dept. of Computer Science *Yonsei University* **Seoul, Korea** *2022-Present*
Relevant Courses: Advanced image processing, Medical image analysis, Deep learning for natural language processing, Generative model and data synthesis, Machine learning and pattern recognition.

Dept. of Human Intelligence and Information Engineering *Sanmyung University* **Seoul, Korea** *2017-2022*
Relevant Courses: C Programming, Python, Data Structure, Linear Algebra, Discrete Mathematics, Probability and Statistics, Algorithm, Big Data Analysis, Machine Vision Programming, Bio Sytstem, Open API Programming.

Publications (* Equal contribution)

1. EAGLE: Eigen Aggregation Learning for Object-Centric Unsupervised Semantic Segmentation, Chanyoung Kim*, **Woojung Han***, Dayun Ju, Seong Jae Hwang, Computer Vision and Pattern Recognition (CVPR), 2024. *(Highlights, top 11% of accepted papers.* (Paper)(Page)

2. (Preprints) Advancing Text-Driven Chest X-Ray Generation with Policy-Based Reinforcement Learning, **Woojung Han***, Chanyoung Kim*, Dayun Ju, Seong Jae Hwang, arxiv, 2024. (Paper)

3. CoBra: Complementary Branch Fusing Class and Semantic Knowledge for Robust Weakly Supervised Semantic Segmentation, **Woojung Han**, Seil Kang, Seil Kang, Kyobin Choo, Seong Jae Hwang, arxiv, 2024. (Paper)

4. Effect of Time Window Size for Converting Frequency Domain in Real-Time Remote Photoplethysmography Extraction, Yu Jin Shin, **Woojung Han**, Kun Ha Suh & Eui Chul, IHCI, 2021. (Paper)

Professional Experience

M.S./Ph.D Student, *(Medical Imaging and Computer Vision Lab)* **Yonsei University, Korea** *03/2022 - present*
- Weakly Supervised Semantic Segmentation (WSSS).
- Unsupervised Semantic Segmentation (USS).
- Diffusion Models for Medical Imaging.

Bootcamp, *(Google Developer)* **Seoul, Korea** *06/2022 - 09/2022*
Google Machine Learning Bootcamp 2022.

Intern, *(Algorithm Machine Intelligence Lab)* **POSTECH, Korea** *06/2021 - 08/2021*
- Efficient human behavior understanding.
- Human mesh Recovery.

Intern, *(Korea University Computer Vision Lab)* **Korea University, Korea** *03/2021 - 06/2021*
- Hand Grasp Type Estimation.

Intern, *(Pattern Recognition Lab)* **Sangmyung University, Korea** *09/2018 - 11/2020*
- Real-time Remote photoplethysmography extraction.

Certifications

- Tensorflow Developer Certificate (July. 2022) - Tensorflow
- YONSEI Medical Scientist Training Program (July. 2023) - Yonsei University

- Summer Program in University of Southern California (Aug. 2023) - USC

Honors & Awards

- Lip Reading (2nd Prize) (Dec. 2021) - Graduation Project
- Medical Segmentation (3rd Prize) (Dec. 2021) - MAIC Surgical Instruments Segmentation
- Health Care Body Position (3rd Prize) (Feb. 2021) - Korea SW Central University Hackton
- Music Recommendation (4rd Prize) (Dec. 2020) - SM AI Competition
- Image Inpainting (2nd Prize) (Dec. 2020) - SM AI Competition

Teaching Experience

Teacher *Samsung*
DX training, AI Project.
Teacher *Samsung*
AI, DX, Perceptron, AI Project.
Coach *NAVER+MOBULABS*
Basic of AI, AI Team Project Coach.
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Basic of AI, AI Team Project Coach.
Coach *NAVER+MOBULABS*
Basic of AI, AI Team Project Coach.
Coach *KT AIVLE*
Basic of AI, Machine Learning, Deep Learning.
Coach *LG Academy AI Camp*
Classification, RNN, Text Classification, Segmentation.

Outsourcing

- FaceSwap

Skills

- **Python**, Pytorch, Keras, Tensorflow.
- C, C++, Java, MATLAB.