Dayun Ju

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EDUCATION

Yonsei University Mar 2021 - Present
Bachelor of Computer Science *Seoul, South Korea*
- Expected graduation: August 2025

RESEARCH INTERESTS

- **Computer Vision**: Object Segmentation, Representation Learning, Diffusion, Multimodal
- **Medical Imaging**: Medical Image Generation

CONFERENCE PAPERS

1. Woojung Han, Chanyoung Kim, **Dayun Ju** and Seong Jae Hwang. Advancing Text-Driven Chest X-Ray Generation with Policy-Based Reinforcement Learning. *In International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)*, 2024
   Spotlight: top 3.4% of submissions

2. Chanyoung Kim, Woojung Han, **Dayun Ju** and Seong Jae Hwang. EAGLE: Eigen Aggregation Learning for Object-Centric Unsupervised Semantic Segmentation. *In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024
   Highlight: top 2.8% of submissions

RESEARCH EXPERIENCE

Medical Imaging and Computer Vision Lab Mar 2023 - Present
Undergraduate Researcher (Advisor: Seong Jae Hwang) *Seoul, South Korea*
- Currently researching Training-Free Open-Vocabulary Semantic Segmentation
- Contributed to research on a chest X-ray generative model using policy gradient reinforcement learning [1]
- Contributed to research on object-centric representation learning methods for unsupervised semantic segmentation [2]
- Participated in a collaborative research project with the School of Dentistry

PROJECT EXPERIENCE

Detecting TMJ MRI Abnormalities Using TMJ Tomographic Imaging Oct 2023 - Present
AI Researcher
- Collaborated with the School of Dentistry to develop guidelines for TMD prevention using ML techniques
- Won the Best Oral Presentation Award at The American Academy of Orofacial Pain Conference 2024
- Funded by *National Research Foundation of Korea (NRF)* and *Yonsei University*

MEETable Development Sep 2023 - Sep 2024
Frontend Developer & Project Coordinator
- Developed a web application that allows users to conveniently set meeting times
- Contributed as a frontend developer using React.js
- Funded by *Institute for Higher Education Innovation Yonsei University*

Alzheimer's Disease Classification Jul 2024 - Aug 2024
Machine Learning Developer
- Designed and trained a model to classify the progression of Alzheimer's disease using a Kaggle dataset

3D Archery Game Development May 2024 - Jun 2024
Team Leader & Developer
- Created a 3D archery game using C++ and Blender for the final project in the "Computer Graphics" course

Photo Classifier Nov 2022 - Dec 2022

Machine Learning Developer

- Developed a web service to streamline photo categorization in group sharing scenarios, utilizing the pre-trained insightface module (buffalo_sc) for face detection

Uni-DTHON Competition Feb 2022 - Nov 2022

Committee

- Organized a hackathon and datathon in collaboration with student councils from six universities
- Managed the datathon track team, focusing on the development of models for dataset classification

SKILLS

Technical Skills

- **Progrmming Languages**: C/C++, Python (PyTorch, Tensorflow), MATLAB
- **Web Development**: HTML, CSS, JavaScript (React.js)
- **Data Enineering**: R, SQL

Languages

- **Korean**: native
- **English**: intermediate (OPIc IM2 (Intermediate Mid 2))

ADDITIONAL INFORMATION

Undergraduate-Graduate School Linked Course Aug 2023 - Present

- Expected to enroll in the graduate program in Artificial Intelligence in September 2025
- Took a graduate-level course in advance: Recent Advances in Multimodal Deep Learning

University of Southern California (USC) Summer Program Jul 2024 - Aug 2024

Undergraduate Participant *California, United States*

- Completed courses in Artificial Intelligence and Data Science

Yonsei Artificial Intelligence Academic Club (YAI) Jul 2022 - Jun 2023

Member

- Acquired fundamental knowledge of artificial intelligence
- Participated in projects which applied AI concepts
- Studied AI-related academic papers

Yonsei University Computer Science Student Council Dec 2021 - Nov 2022

Vice President

- Organized and managed various school events
- Represented the Computer Science department in the College of Engineering Student Council meetings