

Byungwoo Jeon

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Research Interest

My research goal is to build a representation of the 3d world so that it can be used in real-time for real-world problems. To this end, I focus on (i) how to effectively reduce the computation and memory cost of 3d data and (ii) how to understand primitives in general in terms of neural networks.

- Self-supervised and Contrastive Learning
- Neural Radiance Fields
- Generative Models

Education

Korea University

B.S. in Computer Science & Engineering, Statistics (Double Major)

Seoul, Korea

Mar 2020 - Current

Experience

Algorithmic Intelligence Lab (ALINLAB), KAIST AI

Undergraduate Intern (advisor: Prof. Jinwoo Shin)

Jeongja, Korea

Mar 2023 - Current

- Researched prompt optimization on Vision-Language Models
- Researched Self-supervised Learning on Label-free and Zero-shot Tasks
- Researched Depth Estimation with Neural Radiance Fields
- Participated in the ALINLAB weekly group paper study (*Paper reading & Implementation*)

ARCREAL

Research Intern (host: Prof. Jinwoo Shin)

Gangnam, Korea

Jan 2023 - Current

- Developed AI systems for medical equipment
- Developed segmentation projects
- Researched several 3d vision topics

Machine Learning & Vision Lab (MLVLAB), Korea Univ. CSE

Undergraduate Intern (advisor: Prof. Hyunwoo J. Kim)

Anam, Korea

Jul 2022 - Dec 2022

- Studied Open-Vocabulary Object Detection
- Studied Human-Object Interaction (HOI)
- Participated in the government policy supporting AI challenge team
- Participated in the MLVLAB weekly group paper study (*Paper reading & Implementation*)

M-Monstar

Full-stack Developer

Pangyo, Korea

Jul 2021 - Aug 2021

- Developed a modular e-commerce management platform page using Laravel framework
- Optimized and debugged the site, HAGO

Honors & Awards

K-Data Science Hackathon

Second-Place (2/200)

- Award by chairman of Korea Research Foundation / Prize 3,000,000 won
- Developed a multi-stage time-series forecasting model for predicting school-age population

Siheung, Korea

Nov 2023

Artificial Intelligence Grand Challenge

Top 9 (8th Prize)

- Developed AI for supporting the government policies based on natural language processing
- Developed query parser for pre-processing

Seoul, Korea

Oct 2022 - Dec 2022

Training

LG Aimers

Ranked Top 40 in Hackathon

Seoul, Korea

Oct 2023

United Collegiate Programming Contest

3 Problems solved

Seoul, Korea

Jul 2021

Yonsei-NAVER CLOUD Data Science Course

Completed financial engineering course

Seoul, Korea

Feb 2021 - Jun 2021

Skills

Programming Python (PyTorch, TensorFlow), C, C++, SQL, PHP, Javascript, R, SAS

Miscellaneous Linux, Firebase, Git, \LaTeX

Soft Skills Teamwork, Problem-solving, Documentation, Engaging Presentation.

Extracurricular Activity

KUBIG

Member

- Lectured Mathematics and Statistics for Deep Learning
- Participated in Computer Vision Seminar
- Participated in Time Series Analysis Seminar
- Developed personalized animated-video service using diffusion models
- Participated as a pacemaker in Deep Learning Session of Professor Sungbin Lim, Korea Univ.

Jul 2023 - Jul 2024

Google Developer Students Club

Lead

- Lectured Machine Learning, Databases, and Algorithm courses for undergraduate students
- Developed stable diffusion crawling with text summarization project
- Developed Horang-Studio, personalized AI profile service
- Developed 2023 Google Solution Challenge project (digiHow)
- Lead three teams to the Global Top 100 in 2023 Google Solution Challenge
- Lead one team to the Global Top 10 in 2023 Google Solution Challenge
- Host of 2023 East Asia GDSC Global Hackathon in Tokyo

Jul 2022 - Aug 2023

Korea Computer Science Academy (Academy club in Korea Univ.)

Member & Instructor

- Lectured Data Structure course for undergraduate students
- Lectured C Programming course for undergraduate students

Mar 2020 - Mar 2022

Languages

English Professional proficiency

Korean Native proficiency

Coursework

2020-1	Fundamentals of Data Science	
2020-2	Computer Programming	
2020-2	Probability and Statistics	
2020-2	Data Structure	
2021-1	Algorithm	
2021-1	Theory of Computation	
2021-1	Discrete Mathematics	
2021-1	Linear Algebra	
2021-2	Databases	<i>A+, Second-place</i>
2021-2	Computer Network	
2021-2	Computer Architecture	
2022-1	Statistical Mathematics	
2022-1	Introduction to Probability Theory	
2022-1	Operating Systems	
2022-1	Artificial Intelligence	<i>A+</i>
2022-2	Machine Learning	<i>A+</i>
2022-2	Deep Learning	<i>A+</i>
2022-2	Regression Analysis	
2022-2	Probability and Random Process	
2023-1	Analysis	
2023-1	Natural Language Processing	<i>A+</i>
2023-1	Computer Vision	<i>A+</i>
2023-1	Statistical Data Science	<i>A+, First-place</i>
2023-2	Numerical Analysis	
2023-2	Introduction to Bayesian Statistics	