BYUNGWOO JEON

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RESEARCH INTEREST

The northstar of my research is finding a unified and scalable framework aligned with multi-modalities and human preferences for various vision tasks. To this end, I'm delving into 3D/4D reconstruction problems and focusing on building effective representations of the 3D world to be used in real-time for real-world problems.

- **High-dimensional vision**
  - Implicit Neural Representations
  - Gaussian Splatting

- **Generative models**
  - Diffusion models
  - Flow matching

PUBLICATIONS

C: conference, J: journal, W: workshop, P: preprint / * equal contribution

[P1] Consistent Absolute Depth Estimation via Coordinated Feature Synthesis in 3D Space
Subin Kim*, Seong Hyeon Park*, <u>Byungwoo Jeon</u>, Sihyun Yu, Kihyuk Sohn, and Jinwoo Shin
Preprint

[C1] TrackIME: Enhanced Video Point Tracking via Instance Motion Estimation
Seong Hyeon Park, Huiwon Jang, <u>Byungwoo Jeon</u>, Sukmin Yun, Paul Hongsuck Seo, and Jinwoo Shin
Conference on Neural Information Processing Systems (NeurIPS), 2024, Spotlight Presentation

WORK EXPERIENCE

ALINLAB, Research Intern (advisor: Prof. Jinwoo Shin) — Jeongja, South Korea / Mar 2023 - Aug 2024
Arcreal, ML Engineer (host: Prof. Jinwoo Shin) — Gangnam, South Korea / Jan 2023 - Jan 2024
MLVLAB, Research Intern (advisor: Prof. Hyunwoo J. Kim) — Anam, South Korea / Jul 2022 - Dec 2022
M-monstar, Fullstack Engineer — Pangyo, South Korea / Jul 2021 - Aug 2021

EDUCATION

KAIST, M.S. student in Artificial Intelligence (advisor: Prof. Jinwoo Shin) — Sep 2024 - Aug 2026 (Expected)
Korea University, B.S. in Computer Science and Engineering, Statistics (second major) — Mar 2020 - Aug 2024

EXTRACURRICULAR ACTIVITIES

Google Developer Student Clubs @ Korea University, Lead and Founder — Aug 2022 - Jul 2023

HONORS & AWARDS

Silver Prize, K-Data Science Hackathon, 2023 ($2,000)
Top 8, Artificial Intelligence Grand Challenge, 2022
Dean's List, Korea University, 2020 - 2023

PROJECTS

Google DSC, "Google Solution Challenge: Recovery," 2024
Google DSC, "Horang Studio: diffusion-based personalized AI profile service," 2023
Google DSC, "Google Solution Challenge: digiHow," 2023

SELECTED TALKS

Yonsei & Korea University, Google DSC, "Towards the New World of Computing: CV on Real-world," Dec 2024
Korea University, Google DSC, "Recent Advances in Machine Learning," Nov 2023

LANGUAGES

- **Python** Advanced
- **C/C++** Advanced
- **Javascript** Intermediate