Hyunsoo Kim M.S.

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EDUCATION	**Department of Artificial Intelligence, Korea University** Seoul, Republic of Korea

EDUCATION

Department of Artificial Intelligence, Korea University — Seoul, Republic of Korea
M.S. in Artificial Intelligence — Sep 2024 - present
- Advisor: Prof. Donghyun Kim (co-advised by Suhyun Kim)
- Research area: Diffusion Models and AI safety

Department of Statistics, Inha University — Incheon, Republic of Korea
B.S. in Statistics and Software Engineering — Mar 2018 - Aug 2024
Two-year break for military service (Jul 2019 — Feb 2021)

PUBLICATIONS

1. **Hyunsoo Kim**, Wonjun Lee, Donghyun Kim[†], Suhyun Kim[†]. ReSafe: Enhancing Safety of Text-to-Image Diffusion via Post-Hoc Image Back Translation. *Under Review.*

2. Yujin Kim[*], **Hyunsoo Kim**[*], Hyunwoo J. Kim. Suhyun Kim. When Model Knowledge meets Diffusion Model: Diffusion-assisted Data-free Image Synthesis with Alignment of Domain and Class. *International Conference on Machine Learning (ICML) 2025.*

3. **Hyunsoo Kim**, Donghyun Kim[†], Suhyun Kim[†]. Difference Inversion: Interpolate and Isolate the Difference with Token Consistency for Image Analogy Generation. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2025.*

EXPERIENCE

Korea Institute of Science and Technology (KIST) — Mar 2024 - Jun 2024
Undergraduate Researcher *(Advisor: Suhyun Kim)*
- Research on Model Inversion: Data-free image synthesis via optimizing text embedding on a text-to-image diffusion model.

Medical Image Innovation Lab, Seoul National University — Dec 2023 - Feb 2024
Undergraduate Intern *(Advisor: Wonjin Lee)*
- Research on conditional generation and image inpainting in medical domains using diffusion model.

Mathmatical Intelligence Lab, Inha University — Aug 2022 - Sep 2022
Undergraduate Intern *(Advisor: Yoonsuk Hyun)*
- Studied Visual Language Models such as CLIP, CoCa, Flamingo.

Artificial Intelligence in Finance Lab, Inha University — Feb 2022 - Jul 2022
Undergraduate Intern *(Advisor: Doguk Kim)*
- Studied the basic concepts of Deep Learning, with a particular focus on the Transformer model.
- Participated in the M6 competition, a stock price prediction competition, and wrote baseline code using Transformer and GRU.

PROJECTS

Text-to-Emoji Generation with Diffusion Models
Naver Connects Foundation — Sep 2022 - Feb 2023

AWARDS AND HONORS

- **Kim Eul-Hyung Love of Natural Science Scholarship**, Inha University — Feb 2023
- **2nd Prize**, Inha AI Challenge — Jul 2022