SEOJIN KIM

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RESEARCH INTEREST

My main research goal is to efficiently adapt large language models for domain-specific applications, e.g., drug discovery(ICML'24, EMNLP'25), accelerated inference(EMNLP'25), and visual image generation([P1]).

- **Domain-Specific Large Language Models**
  ICML'24, EMNLP'25, EMNLP'25, [P1]
- **AI for drug discovery**
  TMLR'24, ICML'24, EMNLP'25,
- **Robust AI system**
  AAAI'23, TMLR'24

EDUCATION

Seoul National University, J.D. in School of Law — Mar. 2025 - Present

KAIST, M.S. in Artificial Intelligence (completed Ph.D. coursework without completing a dissertation) - Advisor: Prof. Jinwoo Shin — Sep. 2021 - Feb. 2025

KAIST, B.S. in Chemistry (major) & Mathematics (double major) & Computer Science (double major) - Ranked 1st Overall in the Chemistry Department, Summa Cum Laude (GPA: 4.08/4.3) — Mar. 2016 - Aug. 2021

PUBLICATIONS

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

[P1] FontAdapter: Instant Font Adaptation in Visual Text Generation
Myungkyu Koo, Subin Kim, Sangkyung Kwak, Jaehyun Nam, Seojin Kim, Jinwoo Shin
Preprint, 2025

[C4] An Efficient Tokenization for Molecular Language Models
Seojin Kim*, Hyeontae Song*, Jaehyun Nam, Jinwoo Shin
Conference on Empirical Methods in Natural Language Processing (EMNLP), 2025 (findings)

[C3] Mamba Drafters for Speculative Decoding
Daewon Choi, Seunghyuk Oh, Saket Dingliwal, Jihoon Tack, Kyuyoung Kim, Woomin Song, Seojin Kim, Insu Han, Jinwoo Shin, Aram Galstyan, Shubham Katiyar, Sravan Babu Bodapati
Conference on Empirical Methods in Natural Language Processing (EMNLP), 2025 (findings)

[C2] Data-Efficient Molecular Generation with Hierarchical Textual Inversion
Seojin Kim, Jaehyun Nam, Sihyun Yu, Jinwoo Shin
International Conference on Machine Learning (ICML), 2024

[C1] Confidence-aware Training of Smoothed Classifiers for Certified Robustness
Jongheon Jeong*, Seojin Kim*, Jinwoo Shin
AAAI Conference on Artificial Intelligence (AAAI), 2023 (oral)

[J2] Confidence-aware Denoised Fine-tuning of Off-the-shelf Models for Certified Robustness
Suhyeok Jang*, Seojin Kim*, Jinwoo Shin, Jongheon Jeong
Transactions on Machine Learning Research (TMLR), 2024

[J1] Holistic Molecular Represnetaion Learning via Multi-view Fragmentation
Seojin Kim*, Jaehyun Nam*, Junsu Kim, Hankook Lee, Sungsoo Ahn, Jinwoo Shin
Transactions on Machine Learning Research (TMLR), 2024

HONORS & AWARDS

Dean's List in the School of Freshman, Fall 2016
Dean's List in the Department of Chemistry, Spring 2017 and Fall 2017
KAIST Presidential Fellowship (KPF), 2018
Dean's List in the College of Natural Science, 2019

ICML Google Travel Grant ($1,500), 2024

EXPERIENCES

Internship: Institute for Basic Science (IBS), 2017
Internship: SK Hynix HARC Etch Team, 2019
Visiting student: Technische Universität München (Technical University of Munich), 2019
Research project: "Neural Differential Equation for Stock Data Prediction" (advisor: Prof. Jinwoo Shin), 2021
Invited talk: "AI-based Molecular Representation Learning & Generation" in POSTECH, 2023
Domestic patent: "Training Method and Apparatus for Adversarial Robustness of Neural Network Model", 2024
Conference reviewer: ICML (2023, 2024, 2025), NeurIPS (2023, 2024), ICLR (2024, 2025), AISTATS (2023)
Journal reviewer: TMLR (2024)