Jaehyun Nam

johnnam513@kaist.ac.kr • +82-10-3547-0513

OVERVIEW

I am a 1st year Ph.D. student at Korea Advanced Institute of Science and Technology (KAIST), advised by Prof. Jinwoo Shin. Prior to this, I received M.S. in Artificial Intelligence at KAIST and B.S. in Industrial Engineering and Mathematical Sciences (minor) at Seoul National University (SNU). My research interests focus on developing algorithms for specific data types, specifically (i) tabular data and (ii) molecular data. More recently, I am interested in utilizing foundation models (e.g., large language models, text-to-molecule models) to learn better representations.

Keywords: Deep tabular learning, Machine learning for science, Foundation models

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Republic of Korea

- Ph.D. in Artificial Intelligence — Sep 2023 – Present
  - Advisor: Prof. Jinwoo Shin
- M.S. in Artificial Intelligence — Mar 2022 – Aug 2023
  - Advisor: Prof. Jinwoo Shin

Seoul National University (SNU), Seoul, Republic of Korea

- B.S. in Industrial Engineering and Mathematical Sciences (minor) — Mar 2016 – Feb 2022
  - Advisor: Prof. Jaewook Lee

PUBLICATIONS

(*: Equal contribution)

CONFERENCES

[1] **STUNT: Few-shot Tabular Learning with Self-generated Tasks from Unlabeled Tables**
Jaehyun Nam, Jihoon Tack, Kyungmin Lee, Hankook Lee, Jinwoo Shin
International Conference on Learning Representations (ICLR), 2023, **Spotlight presentation**
NeurIPS Workshop on Table Representation Learning (NeurIPSW-TRL), 2022
Bronze Prize, Samsung Humantech Paper Awards, 2023
Recipient, Google Conference Scholarships (APAC), 2023
Travel Award, International Conference on Learning Representations (ICLR), 2023
Grand Prize, KAIST-Samsung Electronics Industry-Academia Cooperation Paper Award, 2023

WORKSHOPS

[1] **Fragment-based Multi-view Molecular Contrastive Learning**
Seojin Kim*, **Jaehyun Nam***, Junsu Kim, Hankook Lee, Sungsoo Ahn, Jinwoo Shin
ICLR Workshop on Machine Learning for Materials (ICLRW-ML4Materials), 2023

PREPRINTS

[3] **SuRe: Improving Open-domain Question Answering of LLMs via Summarized Retrieval**
Jaehyung Kim, **Jaehyun Nam**, Sangwoo Mo, Jongjin Park, Sang-Woo Lee, Minjoon Seo, Jung-Woo Ha, Jinwoo Shin

[2] **Sample-Efficient Molecular Generation with Hierarchical Textual Inversion**
Seojin Kim, **Jaehyun Nam**, Sihyun Yu, Younghoon Shin, Jinwoo Shin

[1] **Semi-supervised Tabular Classification via In-context Learning of Large Language Models**
Jaehyun Nam, Woomin Song, Seong Hyeon Park, Jihoon Tack, Sukmin Yun, Jaehyung Kim, Jinwoo Shin

INVITED TALKS

- **Semi-supervised Tabular Classification via In-context Learning of Large Language Models**
  Samsung Advanced Institue of Technology (Suwon, Korea) — Jun 2023
- **STUNT: Few-shot Tabular Learning with Self-generated Tasks from Unlabeled Tables**
  AI Expo Korea (Seoul, Korea) — May 2023
  International Conference on Learning Representations (Kigali, Rwanda) — May 2023
  Samsung Electronics Co., Ltd. (Virtual) — Mar 2023
  MOGAM Institue for Biomedical Research (Virtual) — Mar 2023
- **Privacy-preserving Median Selection and Secure Aggregation in Federated Learning**
  2021 Korean Mathematical Society Fall Meeting (Virtual) — Oct 2021
  Special Prize, National Cryptography Contest, 2021

WORK EXPERIENCES

- **SK Hynix** — Dec 2020 – Feb 2021
  Undergraduate Intern, Collaborate with Dr. Songho Baek's AI Solution team
- **Industrial & Mathematical Data Analytics Research Center (IMDARC)** — Sep 2020 – Dec 2020
  Undergraduate Intern, Collaborate with Prof. Woong Kook and Simplatform.Co.,Ltd

RESEARCH EXPERIENCES

- **CryptoLab**, Department of Mathematcial Sciences, SNU — Mar 2021 – Feb 2022
  Undergraduate Research Intern, Advised by Prof. Junghee Cheon
- **DSAIL**, Department of Industrial and Systems Engineering, KAIST — Dec 2020 – Jun 2021
  Undergraduate Research Intern, Advised by Prof. Chanyoung Park
- **SNUDM**, Department of Industrial Engineering, SNU — Jan 2020 – Feb 2020
  Undergraduate Research Intern, Advised by Prof. Sungzoon Cho

HONORS & AWARDS

- **Grand Prize ($5,000)**, KAIST-Samsung Electronics Industry-Academia Cooperation Paper Award — Aug 2023
- **Travel Award ($1,000)**, International Conference on Learning Representations (ICLR) — May 2023
- **Recipient ($3,000)**, Google Conference Scholarships (APAC) — May 2023
- **Bronze Prize ($5,000)**, Samsung Humantech Paper Awards — Feb 2023
- **Special Prize ($1,000)**, National Cryptography Context — Oct 2021
- **Recipient ($6,000)**, Hanseong Scholarship for Gifted Students — 2014–2016

TEACHING

- Peer Tutor, College Writing 2: Writing in Science & Technology, SNU — Fall 2020 – Fall 2021
- Peer Tutor, Caluculus 1, SNU — Spring 2020

LANGUAGES

- Korean: Native language.
- English: Fluent

SKILLS

- Python, PyTorch, LaTeX: Proficient
- R, Mosel, TensorFlow: Working Knowledge

[*CV compiled on 2023-10-06*]