YOUNGDO LEE

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RESEARCH INTERESTS

My ultimate research goal is to contribute to the development of Artificial General Intelligence (AGI) capable of learning from minimal data and solving complex, real-world tasks that remain challenging for current AI models. Specifically, my recent research interests focus on the following areas:

Scaling Deep Reinforcement Learning

- Designing efficient RL architectures that can scale with larger networks and increased computational resources.
- Related: SimbaV2

Generative Modeling with Limited Data

- Designing algorithms that can learn/adapt generative model effectively in low-data regimes (e.g. Personalization)
- Related: Extracting Any Concepts

Drawing from my experience in these domains, I aim to further advance data-efficient, generalizable learning approaches and apply them to high-impact fields such as robotics and real-world embodied AI.

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST) Sep. 2024 - Present

- M.S. in AI (GPA: 4.24/4.3) Advisor: Jaegul Choo

Korea Advanced Institute of Science and Technology (KAIST) Mar. 2020 - Aug. 2024

- B.S. in Computer Science and Mathematics (*Summa Cum Laude*, GPA: 4.03/4.3)

PUBLICATIONS & PREPRINTS

SimbaV2: Hyperspherical Normalization for Scalable Deep Reinforcement Learning Under Review
Hojoon Lee*, **Youngdo Lee***, Takuma Seno, Donghu Kim, Peter Stone, Jaegul Choo
arXiv / project page / code

Extracting Any Concepts from an Image for Controllable Text-to-Image Generation Under Review
Seunghwan Choi, Jooyeol Yun, **Youngdo Lee**, Jaegul Choo
paper

Abstraction and Reasoning Challenge with Decision Transformer KCC, ICMLW 2023
Jaehyun Park, Jaegyun Im, **Youngdo Lee**, Donghyeon Shin, Sejin Kim, Sundong Kim
paper / arXiv (ICMLW version)

WORK EXPERIENCE

Institute of Basic Science (IBS) Dec. 2022 - Jun 2023
Abstraction and Reasoning Challenge via Imitation Learning with Decision Transformer *Daejeon, Korea*

- Mentor: Meeyoung Cha / Sundong Kim

NCSOFT Speech AI Lab Jul. 2022 - Aug. 2022
Deep Learning-based Melody Generation *Seongnam, Korea*

AWARD & HONORS

KAIST Dean's List Award Fall 2022, Spring 2023
KAIST KAIST Presidential Fellowship (KPF) Mar. 2020 - Aug. 2024