

Sohyun An

Ph.D. Student in Computer Science at UCLA

 E-mail |  Website |  LinkedIn |  Github

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RESEARCH INTERESTS

My research aims to make (multimodal) large language models more reliable, efficient, and adaptable when reasoning over real-world information. I focus on enabling models to strategically think and incorporate external knowledge to better interact with complex environments across different modalities.

My current research focuses include:

- **Reasoning-Centric (M)LLMs:** Improving how models engage in effective and trustworthy reasoning within dynamic contexts.
- **Search-Augmented Intelligence:** Developing methods that enable models to leverage external information for more accurate and grounded intelligence.
- **Efficient Learning and Optimization:** Designing general methodologies that enable (M)LLMs to learn, adapt, and reason efficiently without compromising reliability or depth.
- **Robust Multimodal Generalization:** Developing methods that allow multimodal models to reliably generalize over information within complex and unpredictable real-world environments.

EDUCATION

- **University of California, Los Angeles (UCLA)** Sep 2024 - Present
Ph.D. in Computer Science
◦ Advisor: [Prof. Cho-Jui Hsieh](#) Los Angeles, CA
- **Korea Advanced Institute of Science and Technology (KAIST)** Aug 2022 - Aug 2024
M.S. in Artificial Intelligence
◦ Advisor: [Prof. Sung Ju Hwang](#) Seoul, South Korea
- **Seoul National University (SNU)** Mar 2017 - Aug 2021
B.S. in Materials Science and Engineering
◦ Summa Cum Laude Seoul, South Korea

PUBLICATIONS

- [7] **DialectGen: Benchmarking and Improving Dialect Robustness in Multimodal Generation.**
Yu Zhou*, Sohyun An*, Haikang Deng*, Da Yin, Clark Peng, Cho-Jui Hsieh, Kai-Wei Chang, Nanyun Peng (*: equal contribution)
Arxiv
- [6] **Unlabeled Data Improves Fine-Grained Image Zero-shot Classification with Multimodal LLMs.**
Yunqi Hong, Sohyun An, Andrew Bai, Neil YC Lin, Cho-Jui Hsieh
NeurIPS 2025
- [5] **Don't Think Longer, Think Wisely: Optimizing Thinking Dynamics for Large Reasoning Models.**
Sohyun An, Ruochen Wang, Tianyi Zhou, Cho-Jui Hsieh
NeurIPS 2025
- [4] **One Prompt is not Enough: Automated Construction of a Mixture-of-Expert Prompts.**
Ruochen Wang*, Sohyun An*, Minhao Cheng, Tianyi Zhou, Sung Ju Hwang, Cho-jui Hsieh (*: equal contribution)
ICML 2024
- [3] **DiffusionNAG: Predictor-guided Neural Architecture Generation with Diffusion Models.**
Sohyun An*, Hayeon Lee*, Jaehyeong Jo, Seanie Lee, Sung Ju Hwang (*: equal contribution)
ICLR 2024
- [2] **Meta-Prediction Model for Distillation-aware NAS on Unseen Datasets.**
Hayeon Lee*, Sohyun An*, Minseon Kim, Sung Ju Hwang (*: equal contribution)
ICLR 2023 spotlight
- [1] **Lightweight Neural Architecture Search with Parameter Remapping and Knowledge Distillation.**
Hayeon Lee*, Sohyun An*, Minseon Kim, Sung Ju Hwang (*: equal contribution)
AutoML 2022

ACADEMIC SERVICES

• Conference Reviewer

- 2024, 2025, 2026 International Conference on Learning Representations (ICLR)
- 2024, 2025 International Conference on Machine Learning (ICML)
- 2023, 2024, 2025 Neural Information Processing System (NeurIPS)
- 2023 International Conference on Automated Machine Learning (AutoML)

• Journal Reviewer

- 2025 IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)

WORK EXPERIENCE

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|---|---|
| • Meta
<i>Research Scientist Intern @ Meta Superintelligence Labs Search</i> | <i>Jun 2025 - Present</i>
<i>Menlo Park, CA</i> |
| • Korea Advanced Institute of Science and Technology (KAIST)
<i>Research Intern @ Machine Learning and Artificial Intelligence Lab (MLAI Lab)</i> | <i>Apr 2022 - Jul 2022</i>
<i>Seoul, South Korea</i> |
| • Samsung
<i>Engineer @ Samsung Electronics Device Solution</i> | <i>Aug 2021 - Mar 2022</i>
<i>Cheonan, South Korea</i> |
| • Seoul National University (SNU)
<i>Research Intern @ Neuromorphic Materials and Devices Lab</i> | <i>Jul 2020 - Sep 2020</i>
<i>Seoul, South Korea</i> |

PROJECT COLLABORATIONS

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|---|----------------------------|
| • Samsung Advanced Institute of Technology
<i>Material Synthesis Using Machine Learning</i> | <i>Sep 2023 - Jun 2024</i> |
| • Google
<i>AutoML with Large-scale Hyperparameter Meta-Learning</i> | <i>Aug 2022 - Sep 2023</i> |

HONORS AND AWARDS

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|---|--------------------|
| • Computer Science Departmental Award
<i>University of California, Los Angeles (UCLA)</i> | <i>2024</i> |
| • Spotlight Presentation
<i>ICLR</i> | <i>2023</i> |
| • Google Travel Grant for ICLR
<i>Google</i> | <i>2023</i> |
| • Samsung-SNU Scholarship
<i>Samsung</i> | <i>2021</i> |
| • SK Hynix-SNU Scholarship
<i>SK Hynix</i> | <i>2019 - 2020</i> |
| • Merit-based scholarship
<i>Seoul National University (SNU)</i> | <i>2020</i> |
| • Eminence scholarship
<i>Seoul National University (SNU)</i> | <i>2019</i> |
| • Merit-based scholarship
<i>Seoul National University (SNU)</i> | <i>2018</i> |
| • Eminence scholarship
<i>Seoul National University (SNU)</i> | <i>2017</i> |

TEACHING EXPERIENCE

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|---|----------------------------|
| • SNS TA
<i>Korea Advanced Institute of Science and Technology (KAIST)</i> | <i>Aug 2023 - Dec 2023</i> |
| • AI 618 – Generative Model and Unsupervised Learning
<i>Korea Advanced Institute of Science and Technology (KAIST)</i> | <i>Mar 2023 - Jun 2023</i> |