Jaesung R. Park

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Education

Department of Mathematics, UCLA *Sep 2025 – Present*
Ph.D. Student (Advised by Yifan Chen, Ernest K. Ryu)

Department of Mathematical Sciences, Seoul National University *Mar 2024 – Aug 2025*
Master of Science (Advised by Ernest K. Ryu)

Department of Physics & **Astronomy, Seoul National University** *Mar 2017 – Aug 2023*
Bachelor of Science

Publications & Preprints

J. R. Park, J. J. Suh, Y. Hong, and E. K. Ryu. Numerical analysis of HiPPO-LegS ODE for deep state space models. *Transactions on Machine Learning Research*, 2026.

J. R. Park, J. Kim, G. Kim, J. Jo, S. Choi, J. Cho, and E. K. Ryu. Clip-low increases entropy and clip-high decreases entropy in reinforcement learning of large language models. *arXiv Preprint*, 2025.

J. Y. Choi, **J. R. Park**, I. Park, J. Cho, A. No, and E. K. Ryu. Simple Drop-in LoRA conditioning on attention layers will improve your diffusion model. *Transactions on Machine Learning Research*, 2024.

J. Y. Choi, **J. Park**, I. Park, J. Cho, A. No, and E. K. Ryu. LoRA can replace time and class embeddings in diffusion probabilistic models. *NeurIPS Workshop on Diffusion Models*, 2023.

Research Experience

Ryu Optimization Group *Sep 2023 - Present*
Ph.D. Student

- Deep Learning Theory
- Empirical Deep Learning

Nonequilibrium Statistical Mechanics Lab *Sep 2022 - Feb 2023*
Undergraduate Research Intern (Advised by Yongjoo Baek)

Electronic Structures Group *July 2021 - Feb 2022*
Undergraduate Research Intern (Advised by Changyoung Kim)

Honors and Awards

Horn-Moez Award for Excellence in First-Year Ph.D. Studies, UCLA *2026*
Scholarship for Academic Excellence, Seoul National University *2018, 2021, 2022*

Teaching Experience

Samsung AI Expert *Aug 2024*
Support Instructor

LG Electronics AI Employee Training *Aug 2024, Aug 2025*
Support Instructor

Teaching Assistant
Math31B (UCLA)
Reinforcement Learning of Large Language Models, Generative AI and Foundational Models (SNU)

Work & Extracurricular Experience

Republic of Korea Air Force *Oct 2019 - May 2021*
Air Intelligence Wing, Air Force Operations Command

LG Global Challengers *Mar 2018 - Oct 2018*
Selected participant in LG's global undergraduate research and exploration program

Skills

Programming Languages: Python, MATLAB