JADEN PARK

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RESEARCH INTERESTS

My research interest lies in developing highly performant and mathematically justified machine learning systems that can be safely depolyed to solve real-world problems. Currently, I am interested in multimodality, robustness and generalization.

EDUCATION

University of Wisconsin-Madison

Present

Ph.D. in Computer Science

- Research areas: theory and application of foundation models
- Advised by Yong Jae Lee

Seoul National University

2023

B.S. in Mathematics and Computer Science, 4.0/4.0 Upper Major GPA, summa cum laude

- Research areas: foundation models, representation learning, real-time systems
- Advised by Wonjong Rhee

EXPERIENCE

Research Intern at Krafton AI

2023-2024

Advisor: Kangwook Lee, Dimitris Papailiopoulos

• Worked on in-context learning, image clustering and text-based benchmark generation

Research Intern at DRL Lab, SNU

Summer 2021, Summer 2022

Advisor: Wonjong Rhee

• Worked on ECG classification and contrastive learning theory

Research Intern at ML Lab, SNU

2021-2022

Advisor: Hyun Oh Song

Worked on improving dataset condensation by contrastive training

Research Intern at RUBIS Lab, SNU

2020-2021

Advisor: Chang-Gun Lee

Worked on optimal scheduling algorithm of real-time DAG tasks with hard deadlines

AWARDS

CS Departmental Scholarship, UW-Madison	2024-2025
Undergraduate Thesis Award, SNU CSE (best thesis in deep learning)	2023
Krafton AI Fellowship (top 5 undergraduates in deep learning; \$10,000 scholarship)	2023
SNU College of Natural Sciences Planet A Hackathon (1st place; \$4,000 prize)	2021
Outstanding Undergraduate Paper Award, KCC 2021	2021
Best Undergraduate Paper Award, KCC 2020	2020

SELECTED PUBLICATIONS

* indicates equal contribution. For more information, see Google Scholar.

TemporalBench: Benchmarking Fine-grained Temporal Understanding for Multimodal Video Models M. Cai, ..., J. Park, J. Gao, YJ Lee, J Yang arXiv preprint.

Can Mamba Learn How to Learn? A Comparative Study on In-Context Learning Tasks

J. Park, **J. Park**, Z. Xiong, N. Lee, J. Cho, S. Oymak, K. Lee, D. Papailiopoulos *ICML 2024*

Image Clustering Conditioned on Text Criteria

S. Kwon, **J. Park**, M. Kim, J. Cho, E. Ryu, K. Lee ICLR 2024

Learning ECG Representations for Multi-Label Classification of Cardiac Abnormalities

J. Suh, J. Kim, E. Lee, J. Kim, D. Hwang, J. Park, J. Lee, **J. Park**, S. Moon, Y. Kim, M. Kang, S. Kwon, E. Choi, W. Rhee

CinC 2021

Conditionally Optimal Parallelization of Real-Time DAG Tasks for Global EDF

Y. Cho, D. Shin, **J. Park**, C. G. Lee *RTSS 2021*

PATENTS

Parking Management Device and Method for Autonomous Vehicles,
KR Patent Application No. 102020015768 (private)

TEACHING EXPERIENCE

CS240 (Discrete Mathematics), UW-Madison

Fall 2024

• Led discussion sessions, held office hours, graded, answered questions

Introduction to Deep Learning, SNU

Spring 2023

Instructor: Hyun Oh Song

o Graded assignments and exams; answered questions

Mathematical Foundations of Deep Neural Networks, SNU

Fall 2022

Instructor: Ernest K. Ryu

• Graded assignments and exams; answered questions

Mathematics: The Basics and Application 1, SNU

Spring 2019

• Self-organized peer tutoring sessions, later adopted as a department-wise program.

SERVICE

Conferences and Workshops Reviewer, ICLR Reviewer, AAAI Reviewer, ICML Reviewer, ICML Reviewer, NeurIPS Workshop on R0-FoMo

MISCELLANEOUS

English Proficiency TOEFL 118 (2023), SAT 2400 (2015) Erdös Number: 4 $\{E. Ryu, W. Rhee\} \rightarrow S. Boyd \rightarrow P. Diaconis \rightarrow P. Erdös$

REFERENCES

Yong Jae Lee, Associate Professor at University of Wisconsin-Madison, yongjaelee@cs.wisc.edu Wonjong Rhee, Professor at Seoul National University, wrhee@snu.ac.kr