JADEN PARK

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RESEARCH INTERESTS

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

EDUCATION

University of Wisconsin-Madison   2024-
Ph.D. in Computer Science, Present
M.S. in Computer Science, 2024-2025

- Research areas: understanding and improving (multi-modal) foundation models
- *4.0/4.0 GPA*
- Advised by Yong Jae Lee

Seoul National University   2023
B.S. in Mathematics and Computer Science

- Research areas: foundation models, representation learning, real-time systems
- *4.0/4.0 Upper Major GPA, summa cum laude*
- Advised by Wonjong Rhee

EXPERIENCE

Research Scientist Intern at Adobe Research, San Jose, CA   May 2025 - Jan 2026
Advisor: Valentin Deschaintre, Krishna Kumar Singh

- Working on material-semantics aware multimodal segmentation

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
ECE Distinguished Graduate Fellowship, UW-Madison (declined)	2024

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.

Contamination Detection for VLMs using Multi-Modal Semantic Perturbation
J. Park, M. Cai, F. Yao, J. Shang, S. Lee, YJ Lee
arXiv preprint

Decomposing Complex Visual Comprehension into Atomic Visual Skills for Vision Language Models
H. Chae, S. Yoon, **J. Park**, C. Chun, Y. Cho, M. Cai, YJ Lee, E. Ryu
arXiv preprint

TemporalBench: Benchmarking Fine-grained Temporal Understanding for Multimodal Video Models
M. Cai, ⋯, **J. Park**, J. Gao, YJ Lee, J Yang
arXiv preprint, NeurIPS 2024 Workshop on Video-Language Models (oral)

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) | 2020 |

TEACHING EXPERIENCE

| **CS639 (Deep Learning for Computer Vision), UW-Madison** | Spring 2025 |

Instructor: Yong Jae Lee

○ Held office hours, designed exam questions, graded, answered questions

| **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

○ 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, CVPR   2026
○ Reviewer, NeurIPS   2025
○ Reviewer, ICCV   2025
○ Reviewer, ICML   2024, 2025
○ Reviewer, ICLR   2025, 2026
○ Reviewer, AAAI   2025, 2026
○ Reviewer, NeurIPS Workshop on R0-FoMo   2024
○ Reviewer, ICCV Workshop on Closing the loop between Vision and Language   2025

MISCELLANEOUS

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