

Juhyun ‘Simon’ Park

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Education	Princeton University M.S.E. in Computer Science (Adviser: Sanjeev Arora) A.B. in Mathematics, Cum Laude	<i>Princeton, NJ, USA</i> <i>2023 - Current</i> <i>2017 - 2019, 2021 - 2023</i>
Interests	Large Language Models, Machine Learning Theory, Natural Language Processing	
Research Experience	Large Language Models 1. Fine-tuning Math Reasoning Models with Process Supervision Current <ul style="list-style-type: none">Using PRM800K, a dataset of human annotated process supervision data, proposing a method to improve 7B-34B sized models on difficult math reasoning tasks. 2. Email Content Extraction Spring 2023 <i>Adviser: Sebastian Seung</i> <ul style="list-style-type: none">Proposed a double fine-tuning method to train a model that can extract key information from promotional emails 3. Effectiveness of In-Context Learning Fall 2022 <i>Adviser: Danqi Chen</i> <ul style="list-style-type: none">Analyzed empirically what aspects of in-context learning contribute to open-domain QA and summarization tasks Machine Learning Theory 1. Effect of L2 Regularization on ReLU Networks Spring 2023 <i>Adviser: Boris Hanin</i> <ul style="list-style-type: none">Analyzed how L2 regularization on infinite-width, 1-layer ReLU networks restricts the function space for 2-dimensional data 2. Robustness of Shapley Values for Data Valuation Spring 2022 <i>Adviser: Sanjeev Arora</i> <ul style="list-style-type: none">Analyzed the robustness of Shapley values across different training settingsProposed a novel approach of approximating Shapley values by evaluating on simpler models with similarly expressive power	
Publication	Park, S. , “Infinite-Width 1-Layer ReLU Networks with L2 Regularization on 2D Data,” 2023. [link] Arora, S., Park, S. , Jacob, D., and Chen, D., “Introduction to Machine Learning: Lecture Notes for COS324 at Princeton University,” 2022. [link] Park, S. , “Extension of Simple Algorithms to the Matroid Secretary Problem,” 2022. [link]	
Awards	Outstanding Student Teaching Award Princeton University Department of Computer Science	<i>May 2023</i>
	Shapiro Award for Academic Excellence Princeton University, Top 3% of Class	<i>Sep 2019</i>
Teaching Experience	Introduction to Machine Learning Co-Head TA Natural Language Processing Undergraduate TA Introduction to Machine Learning Undergraduate TA	<i>Fall 2023</i> <i>Spring 2023</i> <i>Fall 2022, Spring 2023</i>
Skills	Programming Languages: Fluent in Python, Java / Familiar with C, R, SQL Natural Languages: Native in Korean / Fluent in English, Mandarin Chinese	