

Joongkyu Lee

 joongkyulee.com  [Linkedin](#)  [Google Scholar](#)  jklee0717@snu.ac.kr

RESEARCH INTERESTS

Sequential Decision Making, Reinforcement Learning, Bandit Algorithms, Statistical Machine Learning, Optimization

EDUCATION

Seoul National University, Seoul, South Korea Mar. 2023 - **Present**
Ph.D Candidate in Data Science, Advisor: Min-hwan Oh

Seoul National University, Seoul, South Korea Feb. 2023
M.S. in Data Science, Advisor: Min-hwan Oh

Yonsei University, Seoul, South Korea Feb. 2016
B.S. in Industrial Engineering

PUBLICATIONS

- [8] **Preference-based Reinforcement Learning beyond Pairwise Comparisons: Benefits of Multiple Options**
[J. Lee](#), S. Yi and M. Oh
Neural Information Processing Systems (NeurIPS), 2025.
- [7] **True Impact of Cascade Length in Contextual Cascading Bandits**
H. Choi, [J. Lee](#) and M. Oh
Neural Information Processing Systems (NeurIPS), 2025.
- [6] **Improved Online Confidence Bounds for Multinomial Logistic Bandits**
[J. Lee](#) and M. Oh
International Conference on Machine Learning (ICML), 2025
- [5] **Combinatorial Reinforcement Learning with Preference Feedback**
[J. Lee](#) and M. Oh
International Conference on Machine Learning (ICML), 2025
- [4] **Nearly Minimax Optimal Regret for Multinomial Logistic Bandit (Top 0.2%, 32/15671)**
[J. Lee](#) and M. Oh
Neural Information Processing Systems (NeurIPS), 2024.
- [3] **Randomized Exploration for Reinforcement Learning with Multinomial Logistic Function Approximation**
W. Cho, T. Hwang, [J. Lee](#) and M. Oh
Neural Information Processing Systems (NeurIPS), 2024.
- [2] **Demystifying Linear MDPs and Novel Dynamics Aggregation Framework**
[J. Lee](#) and M. Oh
International Conference on Learning Representations (ICLR), 2024.
- [1] **Learning Uncertainty-Aware Temporally-Extended Actions**
[J. Lee](#), S. Park, Y. Tang, and M. Oh
AAAI Conference on Artificial Intelligence (AAAI), 2024.

EXPERIENCE

Samsung Electronics | *SQL, Python, VBA* Aug. 2018 - Dec. 2020

- Production Management Group at Samsung Electronics DS

Military Service Mar. 2016 - Mar.2018

- Republic of Korea Air Force

INDUSTRY PROJECTS

New Recipe Generation Using GFlowNets	Jan. 2025 - Present
<ul style="list-style-type: none">• Director: Prof. Min-hwan Oh• Funded by <i>Samyang Roundsquare</i>	
Development of Analysis Model to Explore Test Process Equipment Combination	Mar. - Sep. 2022
<ul style="list-style-type: none">• Director: Prof. Min-hwan Oh• Funded by <i>SK hynix</i>	

INVITED TALKS & CONFERENCE PRESENTATION

<i>“Combinatorial Reinforcement Learning with Preference Feedback”</i>	
• 2024 Korea Data Science Conference, Future Research Award	Nov. 2024
<i>“Nearly Minimax Optimal Regret for Multinomial Logistic Bandit”</i>	
• 2024 INFORMS Annual meeting, Vancouver	Oct. 2024
<i>“Contextual Linear Bandits” and “Deep Reinforcement Learning”</i>	
• SK Telecom Market Top AI Course	Jul. - Aug. 2023
<i>“Hierarchical Model-Based Reinforcement Learning with Linear Function Approximation”</i>	
• 2023 Korea Artificial Intelligence Association (KAIA), Best Paper Award	Jul. 2023
• Earlier Version of <i>“Demystifying Linear MDPs and Novel Dynamics Aggregation Framework”</i>	
<i>“Learning Uncertainty-Aware Temporally-Extended Actions”</i>	
• 2023 Korea Data Mining Society	Jun. 2023
• 2022 INFORMS Annual meeting, Indianapolis	Oct. 2022
• 2022 Korea Artificial Intelligence Association (KAIA)	Aug. 2022

AWARDS & SCHOLARSHIPS

Youlchon AI Star Scholarship , <i>Youlchon Foundation (6K USD)</i>	Aug. 2025
BK21 Best Paper Award , <i>BK21 FOUR</i>	Dec. 2024
Future Research Award , <i>K-Data Science Conference</i>	Nov. 2024
Best Paper Award , <i>Korea Artificial Intelligence Association</i>	Jul. 2023
National Excellence Scholarship , <i>Korea Student Aid Foundation (Full Tuition Support)</i>	Mar. 2010 - Feb. 2014

GRANTS

Google East Asia Ph.D. Fellowship* , <i>Google (10K USD/year)</i>	Sep. 2025 - Aug. 2026
NRF Ph.D. Fellowship , <i>National Research Foundation of Korea (18K USD/year)</i>	Sep. 2025 - Aug. 2026

TEACHING EXPERIENCE

Seoul National University	
• Machine Learning & Deep Learning	Spring. 2022
• Data Science & Reinforcement Learning	Fall. 2021