



Joongkyu Lee

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RESEARCH INTERESTS

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

EDUCATION

Seoul National University , Seoul, South Korea	Mar. 2023 - Present
<i>Ph.D Candidate in Data Science, Advisor: Min-hwan Oh</i>	
Seoul National University , Seoul, South Korea	Feb. 2023
<i>M.S. in Data Science, Advisor: Min-hwan Oh</i>	
Yonsei University , Seoul, South Korea	Feb. 2016
<i>B.S. in Industrial Engineering</i>	

PUBLICATIONS

- [2] **Demystifying Linear MDPs and Novel Dynamics Aggregation Framework**
J. Lee and M. Oh
Proceedings of the 12th International Conference on Learning Representations (ICLR), 2024.
- [1] **Learning Uncertainty-Aware Temporally-Extended Actions**
J.Lee, S. Park, Y. Tang, and M. Oh
Proceedings of the 38th AAAI Conference on Artificial Intelligence (AAAI), 2024.

PREPRINTS

- [2] **Randomized Exploration for Reinforcement Learning with Multinomial Logistic Function Approximation**
W. Cho, T. Hwang, J. Lee and M. Oh
Preprint. Under review. Uploaded to arXiv, 2024.
- [1] **Nearly Minimax Optimal Regret for Multinomial Logistic Bandit**
J. Lee and M. Oh
Preprint. Under review. Uploaded to arXiv, 2024.

EXPERIENCE

Samsung Electronics <i>SQL, Python</i>	Aug. 2018 - Dec. 2020
• Production Management Group at Samsung Electronics DS	
Military Service	Mar. 2016 - Mar.2018
• Republic of Korea Air Force	

INDUSTRY PROJECTS

Development of Analysis Model to Explore Test Process Equipment Combination and Improve Flexible Test Performance	Mar. - Sep. 2022
• Director: Prof. Min-hwan Oh	
• Funded by <i>SK hynix</i>	
Development of an AI-Based Virtual Fighter Jet Training System	Feb. 2024 - Present
• Director: Prof. Min-hwan Oh	
• Funded by <i>Korea Aerospace Industries (KAI), LTD</i>	

INVITED TALKS & CONFERENCE PRESENTATION

“Contextual Linear Bandits” and “Deep Reinforcement Learning”

- SK Telecom Market Top AI Course

July. - Aug. 2023

“Hierarchical Model-Based Reinforcement Learning with Linear Function Approximation”

- 2023 Korea Artificial Intelligence Association (KAIA), **Best Paper Award**
- Earlier Version of *“Demystifying Linear MDPs and Novel Dynamics Aggregation Framework”*

July. 2023

“Learning Uncertainty-Aware Temporally-Extended Actions”

- 2023 Korea Data Mining Society
- 2022 INFORMS Annual meeting, Indianapolis
- 2022 Korea Artificial Intelligence Association (KAIA)

June. 2023

Oct. 2022

Aug. 2022

AWARDS & SCHOLARSHIPS

Best Paper Award, Korea Artificial Intelligence Association

July. 2023

National Excellence Scholarship, Korea Student Aid Foundation

Spring. 2010 - Fall. 2013

TEACHING EXPERIENCE

Seoul National University, Seoul, South Korea

- Machine Learning & Deep Learning
- Data Science & Reinforcement Learning

Spring. 2022

Fall. 2021