

CONTACT INFORMATION

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Graduate School of Data Science  
Seoul National University  
1 Gwanak-ro, Gwanak-gu, Seoul, South Korea, 08826

th.hwang@snu.ac.kr  
<https://taehyunable.com>

RESEARCH INTERESTS

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Sequential decision making, Statistical machine learning, Optimization for machine learning

EDUCATION

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**Seoul National University** Mar. 2020 - Present  
Ph.D Candidate in Data Science  
Advisor: Min-hwan Oh

**Sungkyunkwan University** Sept. 2016 - Aug. 2018  
M.S in Mathematics  
Advisor: Yongdo Lim / Co-advisor: Rhee Man Kil  
Thesis: Combination of Gaussian Kernel Function Networks for Traffic Flow Prediction

**Kyungpook National University** Mar. 2010 - Aug. 2016  
B.S in Mathematics (Graduated with the highest honor)  
Minor: Business Administration

EXPERIENCE

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- **The Research Institute of Basic Science, Sungkyunkwan University**  
Research Assistant Sept. 2018 - Feb. 2020

PUBLICATIONS (\* denotes equal contribution)

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- [6] **Lasso Bandit with Compatibility Condition on Optimal Arm**  
Harin Lee\*, **Taehyun Hwang\***, and Min-hwan Oh  
Preprint (*Under Review*)  
• Outstanding Paper Award, Korean Artificial Intelligence Association 2024 Summer Conference
- [5] **Randomized Exploration for Reinforcement Learning with Multinomial Logistic Function Approximation**  
Wooseong Cho\*, **Taehyun Hwang\***, Joongkyu Lee, and Min-hwan Oh  
(To Appear) *Advances in Neural Information Processing Systems 38 (NeurIPS)* 2024  
• Outstanding Paper Award, Korean Artificial Intelligence Association 2023 Summer Conference
- [4] **Model-based Reinforcement Learning with Multinomial Logistic Function Approximation.**  
**Taehyun Hwang** and Min-hwan Oh  
*Proceedings of the 37th AAAI Conference on Artificial Intelligence (AAAI)*, 2023.  
► Oral presentation in main technical session
- [3] **Combinatorial Neural Bandits.**  
**Taehyun Hwang\***, Kyuwook Chai\*, and Min-hwan Oh  
*Proceedings of the 40th International Conference on Machine Learning (ICML)*, 2023  
• Outstanding Paper Award, Korean Artificial Intelligence Association 2022 Summer Conference
- [2] **Deep Learning Aided Evaluation for Electromechanical Properties of Complexly Structured Polymer Nanocomposites.**  
Kyungmin Baek, **Taehyun Hwang**, Wonseok Lee, Hayoung Chung, and Maenghyo Cho  
*Composites Science and Technology*, 109661, 2022.

- [1] **Estimation of Jamming Parameters based on Gaussian Kernel Function Networks.**  
**Taehyun Hwang**, Rhee Man Kil, Hyun Ku Lee, Jung Ho Kim, Jae Heon Ko, Jeil Jo, and Junghoon Lee  
*Journal of the Korea Institute of Military Science and Technology 23 (1), 1-10, 2020.*

## INDUSTRIAL PROJECTS

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- Development of Analysis Model to Explore Test Process Equipment Combination and Improve Flexible Test Performance.  
 Director: Prof. Min-hwan Oh Mar. - Sep. 2022  
 Funded by *SK hynix*
- A Study on the Algorithms for Estimating the Parameters of Autonomous Jamming Technique.  
 Director: Prof. Rhee Man Kil Apr. - Dec. 2018  
 Funded by *Agency for Defense Development* and *LIG Nex1*
- An Industrial Problem Solving Project Using Mathematical Data Analysis.  
 Director: Prof. Yongdo Lim May. - Sept. 2017  
 Funded by *National Institute for Mathematical Sciences*

## INVITED TALKS & CONFERENCE PRESENTATION

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- “*Sequential Decision Making Algorithms with Function Approximation*”  
 • INFORMS APS PhD Student Showcase, Seattle Oct. 2024
- “*Lasso Bandit with Compatibility Condition on Optimal Arm*”  
 • INFORMS 2024 Annual meeting, Seattle Oct. 2024  
 • SNU-KAIST AL/ML Theory Workshop, Gangneung Aug. 2024
- “*Introduction to Online Decision Making*”  
 • Sungkyunkwan University, Department of Mathematics Nov. 2023
- “*Neural Contextual Bandits from Single Action to Combinatorial Actions*”  
 • SK Telecom Market Top AI Course, SK Telecom Tower July 2023
- “*Model-based Reinforcement Learning with Multinomial Logistic Function Approximation*”  
 • Conference of Korea Software Congress (KSC), Busan Dec. 2023  
 • Conference of Korea Data Mining Society (KDMS), Gangneung-Wonju National University June 2023  
 • AAAI 2023, Washington D.C. Feb. 2023  
 • KAIA & NAVER Joint Conference, NAVER 1784 (Seungnam) Nov. 2022  
 • INFORMS 2022 Annual meeting, Indianapolis Oct. 2022
- “*Combinatorial Neural Bandits*”  
 • Advanced neuroimaging and AI 2024, Seoul National University June 2024  
 • AI Seoul 2024, Seoul City Hall Feb. 2024  
 • Conference of Korean Statistical Society (KSS), Sungshin Women’s University Dec. 2023  
 • AIIS Retreat 2023, Seoul National University Nov. 2023  
 • Conference of Korea Data Mining Society (KDMS), Busan Aug. 2022  
 • Conference of Korean Artificial Intelligence Association (KAIA), Jeju Aug. 2022  
 • INFORMS 2021 Annual meeting, Anaheim (Virtual) Oct. 2021
- “*A Gaussian Kernel Function Network for Traffic Flow Prediction*”  
 • Korean Mathematical Society (KMS) 2019 Annual meeting, Hongik University Oct. 2019
- “*Mathematics and Machine learning*”  
 • Kongju National University, Department of Applied Mathematics Sept. 2019

## SCHOLARSHIPS AND AWARDS

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- **Outstanding Paper Award**, Korean Artificial Intelligence Association Aug. 2024
- **YOULCHON AI Star Scholarship**, Youlchon Foundation Aug. 2023
- **Outstanding Paper Award**, Korean Artificial Intelligence Association July 2023
- **AAAI Student Scholarship**, AAAI Feb. 2023
- **Outstanding Paper Award**, Korean Artificial Intelligence Association Aug. 2022

## TEACHING EXPERIENCE

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- **Teaching Assistant** at Seoul National University  
*Data Science & Reinforcement Learning, Foundation of Data Science, Math for Data Science*
- **Teaching Assistant** at Sungkyunkwan University  
*Calculus I/II, Linear Algebra, Discrete Mathematics, Topics in Algebra (Lie Algebra)*

## ACADEMIC SERVICES

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- **Conference Reviewer & Program Committee**  
**ICML:** 2024, 2023  
**NeurIPS:** 2024, 2023, 2022  
**ICLR:** 2025, 2024  
**AAAI:** 2025  
**AISTATS:** 2025