

# Jaehwan Lee

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## Education

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|---|--------------------------------------|
| <b>KAIST</b> , Graduate School of Data Science              | Daejeon, Korea<br>Feb 2025 – present |
| <b>Yonsei University</b> , Department of Applied Statistics | Seoul, Korea<br>Mar 2020 – Feb 2025  |

## Experience

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| <b>Computational Optimization Methods (COMET) Lab</b> , Graduate Researcher<br>Supervised by <a href="#">Prof. Changhyun Kwon</a>             | Daejeon, Korea<br>Feb 2025 – present<br>1 year 1 month   |
| <b>Computational Optimization Methods (COMET) Lab</b> , Undergraduate Researcher<br>Supervised by <a href="#">Prof. Changhyun Kwon</a>        | Daejeon, Korea<br>June 2024 – Aug 2024<br>3 months       |
| <b>Systems Modeling And Programming Lab @ Yonsei (SYMPLY)</b> , Undergraduate Researcher<br>Supervised by <a href="#">Prof. Soongeol Kwon</a> | Seoul, Korea<br>Aug 2022 – June 2024<br>1 year 11 months |

## Publications

**Supervised Optimization Framework for Charging and Discharging Controls of Battery Energy Storage**  
Vol. 15, No. 6, pp. 5610-5621. Nov. 2024.  
Jaehwan Lee, Soongeol Kwon  
[doi.org/10.1109/TSG.2024.3416369](https://doi.org/10.1109/TSG.2024.3416369) (IEEE Transactions on Smart Grid)

## Projects

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|--|---------------------|
| <b>Neural Combinatorial Optimization with Decision Transformer Framework</b><br>Reinforcement Learning Course Team Project <ul style="list-style-type: none"><li>Tools &amp; technologies: Python, PyTorch, OR-Tools</li><li>Conducted research and led team to design neural combinatorial optimization approach based on decision transformer.</li></ul> | May 2024 – May 2024 |
| <b>Optimizing Energy Consumption by Integrating Machine Learning and Mathematical Optimization</b><br>Final Project in ESC 29th <ul style="list-style-type: none"><li>Tools &amp; technologies: Python, Scikit-learn, Gurobi</li><li>Studied predict-then-optimize methodology for optimal energy consumption scheduling.</li></ul>                        | May 2023 – May 2023 |
| <b>Predicting Current Happiness of Seoulites with Happiness Index Data</b><br>Final Project in ESC 28th <ul style="list-style-type: none"><li>Tools &amp; technologies: Python, Scikit-learn, Gurobi</li><li>Studied bayesian statistics and bayesian machine learning for quantifying uncertainty.</li></ul>  | Oct 2022 – Nov 2022 |

## Skills

**Programming:** Python, C++  
**Tools:** PennyLane, Qiskit, Gurobi, ORTools

Languages

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Korean  
Native

English  
Intermediate

Interests

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**Optimization:** Data-driven Optimization, Contextual Optimization, Combinatorial Optimization

**Quantum:** Quantum Machine Learning, Variational Quantum Algorithms, Quantum Optimization

Activities

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Expanded Statistics Club (ESC), 29th Yonsei University  
Jan 2023 – June 2023

Expanded Statistics Club (ESC), 28th Yonsei University  
July 2022 – Dec 2022

Awards

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2nd Prize, BIG CONTEST 2023 Big Data Analysis with  
Emerging Technology  
Dec 2023 – present

4th Prize, BIG CONTEST 2022 Big Data Analysis for Innova-  
tion  
Dec 2022 – present

Honors

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Academic Honors, Spring 2022 Yonsei University  
Aug 2022 – present

Academic Excellence, Fall 2021 Yonsei University  
Feb 2021 – present