

Sujin Yun

MS student @ KAIST

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RESEARCH INTEREST

- Diffusion models
- Reinforcement Learning
- Model-based Optimization

EDUCATION

Master of Science (M.S.)

Korea Advanced Institute of Science and Technology

Daejeon, South Korea

3/2023 – 2/2025 (*expected*)

- Major: Data Science
- Advised by Prof. Jinkyoo Park
- Thesis: Novel generative data augmentation method for offline Reinforcement learning with conditional diffusion model

Bachelor of Science (B.S.)

Yonsei University

Seoul, South Korea

3/2018 – 2/2023

- Major: Industrial Engineering

PUBLICATIONS (*: EQUAL CONTRIBUTION)

[1] **GTA: Generative Trajectory Augmentation with Guidance for Offline Reinforcement Learning**

Jaewoo Lee*, **Sujin Yun***, Taeyoung Yun, Jinkyoo Park

NeurIPS 2024

<https://arxiv.org/abs/2405.16907>

[2] **Guided Trajectory Generation with Diffusion Models for Offline Model-based Optimization**

Taeyoung Yun, **Sujin Yun**, Jaewoo Lee, Jinkyoo Park

NeurIPS 2024

<https://arxiv.org/abs/2407.01624>

[3] **An Offline Meta Black-box Optimization Framework for Adaptive Design of Urban Traffic Light Management Systems**

Taeyoung Yun*, Kanghoon Lee*, **Sujin Yun**, Ilmyung Kim, Wonwoo Jung, Mincheol Kwon, Kyujin Choi, Yoohyeon Lee, Jinkyoo Park

KDD 2024

<https://dl.acm.org/doi/abs/10.1145/3637528.3671606>

TEACHING EXPERIENCE

Korea Advanced Institute of Science and Technology

Daejeon, South Korea

- TA, IE437: Data-Driven Decision Making and Control

3/2024 – 6/2024

INDUSTRY PROJECT

Automated Control of Compressor Operations through offline RL

Samsung Heavy Industry

- Develop an model to control compressor in shipyard
- Researched control algorithms with the objective to optimize power consumptions, using offline Reinforcement learning

4/2023 – 10/2023

EXTRACURRICULAR ACTIVITIES

YAI, Yonsei Artificial Intelligence club

1/2022 – 12/2022

- Served as the president of the club, leading overall club activities and managing members
- Organized and led seminars on graph learning, based on Stanford's CS224w course
- Organized and led seminars on Natural Language Processing with Deep Learning, based on Stanford's CS224n course

Ybigta, Yonsei Big data club

1/2021 – 12/2021

- Led a project to develop a chatbot with emotion-based personas, using a Korean emotion classification dataset, and serve it via a messenger app
- Conducted a study group focusing on research papers about transformers in natural language processing
- Participate in a Docker study group, exploring containerization concepts and applications in real-world

WORK EXPERIENCE

CJ Logistics Data Science Team

Seoul, South Korea

Intern Researcher

1/2022 – 2/2022

- Developing a deep learning model for demand forecasting and vehicle number prediction algorithms based on logistics data.

Voithru

Seoul, South Korea

Intern Data Scientist

3/2021 – 8/2021

- Developing and maintaining KPI dashboard.
- Data analysis on youtube log data and user log data with SQL, python.

AWARDS

Second place on CJ logistics AI/Big data & System Future Technology Challenge

11/2021