

# JAEHWI JANG

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## EDUCATION

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**M.S. in Artificial Intelligence**, Kim Jaechul Graduate School of AI

Korea Advanced Institute of Science and Technology, Korea

*Mar. 2022 – Feb. 2024*

Advisor: Prof. Daehyung Park

GPA: 4.3 / 4.3

**B.S. in Mechanical Engineering & Physics, Minor in Computer Science**

Korea Advanced Institute of Science and Technology, Korea

*Mar. 2014 – Aug. 2021*

GPA: 4.01 / 4.3 (Summa Cum Laude)

**International Exchange Student in Mechanical Engineering Dept.**

Technical University of Munich

*Mar. 2017 – Aug. 2017*

## FELLOWSHIPS, HONORS AND AWARDS

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KAIST Mechanical Engineering Dept. Best Undergraduate Award.

*2022*

KAIST Presidential Fellowship

*Mar. 2016 – Aug. 2021*

Exchange Student Scholarship, \$10,000 funded from KAIST

*Mar. 2017 – Aug. 2017*

KAIST Dean's list

*Sep. 2014*

## PUBLICATIONS

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[J1] **Inverse Constraint Learning and Generalization by Transferable Reward Decomposition**

IEEE Robotics and Automation Letters, 2024 (**Accepted**)

[video] [paper]

**Jaehwi Jang**, Minjae Song, Daehyung Park

[C1] **SGGNet2: Speech-Scene Graph Grounding Network for Speech-Guided Navigation**,

IEEE International Symposium on Robot and Human Interactive Communication, 2023

[paper]

Dohyun Kim\*, Yeseung Kim\*, **Jaehwi Jang\***, Minjae Song\*, Woojin Choi, Daehyung Park

(\*Equally contributed)

[W1] **Physics-Informed Gradient Regularization for Inverse Reinforcement Learning**

RSS Workshop on Experiment-oriented Locomotion and Manipulation Research, 2023

**Jaehwi Jang**, Daehyung Park

## RESEARCH EXPERIENCE

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**Research Assistant**

*Jul. 2021 – Feb. 2022*

Robust Intelligence and Robotics Laboratory, KAIST

Advisor: Prof. Daehyung Park

- Worked on reinforcement learning, inverse reinforcement learning for safe robotic operation
- Explored method for inferring implicit constraints from the demonstration
- Implementing collaborative perception and control modules in ROS for UR5e manipulator

**Undergraduate Research Intern***Mar. 2021 – Jun. 2021*

Algorithmic Intelligence Laboratory, KAIST

Advisor: Prof. Jinwoo Shin

- Explored methods to enhance self-supervised representation learning for visual tasks

**Undergraduate Research Intern***Dec. 2018 – Feb. 2019*

Computational Intelligence for Software Engineering Lab, KAIST

Advisor: Prof. Shin Yoo

- Explored methods for network pruning with software testing techniques

**Research Intern***Jun. 2018 – Aug. 2018*

Netmarble NARC AI Research, Seoul, Korea

- Worked on Object Detection based QA automation for mobile games

**Undergraduate Research Intern***Sep. 2017 – Dec. 2017*

Wave energy control Lab, KAIST

Advisor: Prof. Wonju Jeon

- Worked on metamaterial for acoustic cloak with non-zero background flows
- Explored methods for maximizing conformality of metamaterial in Analogue Transformation Acoustic with Prandtl-Glauert transformation

**PROJECTS AND EXTRACURRICULAR ACTIVITIES**

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**Auxiliary Police** | *Busan Metropolitan Police Agency, (Military Service)**Jul. 2019 – Feb. 2021*

- Worked on Database management at Counter-Terrorism and Auxiliary Police department
- Best auxiliary police commendations from the chief of Busan Metropolitan Police Agency

**Autonomous Ball Picking Robot** | *KAIST**Mar. 2018 – Jun. 2018*

- Team leader, Design and manufacture of robot locomotive and grasp architecture
- ROS programming for robot actions

**KAIST heavy metal band** | *KAIST**Mar. 2014 – Dec. 2017*

- Cooperate with international students
- Club leader for 15', Band leader for 16'

**Students Academic Seminar** | *KAIST Presidential Fellowship program**Jul. 2016 – Dec. 2016*

- Participated in Physics division, Presented a talk on Gravitational Wave

**Human Powered Aircraft** | *Korea Aerospace Research Institute**Mar. 2013 – Oct. 2013*

- Manufacture of aircraft wings and frames
- Successfully flew across 50 meters

**TECHNICAL SKILLS**

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**Languages:** Python, C, C++, Matlab, Rust**Libraries:** PyTorch, JAX, Tensorflow, ROS

And huge interest in Mathematics and Physics