Keonyoung Koh

Korea Advanced Institute of Science and Technology
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Education

M.S. in School of Computing 2024 – Present
Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea
Advisor: Prof. Daehyung Park
- GPA: 4.10

B.S. in Department of Mechanical Engineering 2019 – 2024
Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea
B.S. in Mechanical Engineering & School of Computing (Double major)
- GPA: 3.76 / Major GPA: 3.80

Skills

- **Programming Languages:** Python(advanced), C(intermediate), C++(intermediate)
- **ML Frameworks / Tools:** PyTorch/PyG(advanced), Git(intermediate), Docker(intermediate)
- **Robot SW:** ROS1/ROS2(advanced), Gazebo(advanced), Isaac Sim(basic usage)

Research Interest

- **Imitation Learning for Real-world Robotics (Navigation & Mobile Manipulation)**
- **Vision-Language-Action Model, Robot Foundation Model**

Research Experience

RIRO Lab, *School of Computing, KAIST* 2024 – Present
- Advisor: Prof. Daehyung Park
- Researching imitation learning for constraint-aware mobile robotics
  - Differentiable planner-based imitation learning
  - Intention-aware imitation learning for heterogeneous, mixed-modality human data learning
  - *Submitted to ICRA 2026 and KRoC 2026; under review*
- Researching generative models for safe local motion planning
  - Diffusion-based trajectory generation for local planning
  - Diffusion steering for safe motion generation

RIRO Lab, *School of Computing, KAIST* 2023 – 2024
- Advisor: Prof. Daehyung Park
- Undergraduate Research Program (URP)
- Researched about semantic SLAM and quadrupedal robot navigation
  - Buchi Automaton-based decision making system for reactive planning
  - Perception-to-planning system for outdoor robotic navigation
  - *Best student paper award in RiTA 2024*

Angel Robotics, *Seoul, South Korea* Mar. – Aug. 2022
- Undergraduate internship as part of Co-op program
- Designed adaptive controller for parameter estimation of lower limb exoskeleton robot

Publications

Keonyoung Koh et al. *A Real-World Based 3D Simulation and Robotic Framework for Semantic-Aware Outdoor Navigation*. Submitted to Korea Robotics Society Annual Conference (KRoC) 2026 (under review).

Keonyoung Koh et al. *SuReNav: Superpixel Graph-based Constraint Relaxation for Navigation in Over-constrained Environments*. Submitted to International Conference on Robotics and Automation (ICRA) 2026 (under review).

Jinwoo Kim*, **Keonyoung Koh*** et al, 2024. *Reactive Constraint Relaxation for Urban Environment Navigation*. International Conference on Robot Intelligence Technology and Applications (RiTA) [**Best Student Paper Award**]

Honors and Awards

Best Student Paper Award, RiTA	2024
Cum Laude, KAIST (Graduation Honor)	2024
ME Academic Excellence Award, Department of Mechanical Engineering, KAIST	2021
Dean's List, KAIST	2019