

JINWON KIM
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EDUCATION

Korea Advanced Institute of Science and Technology – Daejeon, Korea **Feb 2023**

Master's in Robotics Program at Scalable Graphics, Vision, and Robotics Lab

- Track: Reinforcement Learning, Deep Learning, Intelligent Robotics
- GPA: 3.65 / 4.3

Kwangwoon University – Seoul, Korea

Feb 2021

Bachelor's in Division of Robotics

- Track: Robot Control, Robot Navigation, Computer Vision
- GPA: 4.23 / 4.5

EXPERIENCE

Korea Institute of Science and Technology – Seoul, Korea **Jun 2019 – Dec 2019**

Center for Intelligent and Interactive Robotics, Student Researcher

- Designed and implemented a data collection pipeline using crawling to acquire 1,000 annotated images of objects in various environments
- Developed object detection and tracking algorithms using YOLOv3 and Siamese
- Published KRoC paper and Registered patent

RESEARCH PUBLICATION

1. Collision-Backpropagation based Obstacle Avoidance Method for a Legged Robot **2022**

Expressed as a Simplified Dynamics Model – BEXCO, Busan, Korea

International conference on control, automation, and systems (iccas2022)

Jinwon Kim, S. Y., Heechan Shin

- Proposed an obstacle avoidance algorithm for legged robots, expressed as a simplified dynamics model, and demonstrated an improvement of up to 15.89 times in the probability of collision-free trajectory planning

2. Collision Backpropagation-based Obstacle Avoidance Method for a Legged Robot **2022**

with Simplified Dynamics Model – Pyeongchang, Korea

Korea robotics society annual conference (kroc2022)

Jinwon Kim, S. Y., Heechan Shin

- Proposed an obstacle avoidance algorithm for legged robots, expressed as a simplified dynamics model, and demonstrated an improvement in the probability of collision-free trajectory planning

3. Robust Multi Object Detection Using Siamese Network – Pyeongchang, Korea **2020**

Korea robotics society annual conference (kroc2020)

Jinwon Kim, KangGeon Kim

- Proposed a real-time robust multi object detection method using Siamese network to improve the object detection performance

PATENT

Robust Multi-object Detection Apparatus and Method Using Siamese Network

2020

KR-Application No. 10-2020-0026298.

KangGeon Kim, Jinwon Kim

- Proposed a real-time robust multi object detection method using Siamese network to improve the object detection performance

PROJECT

Development of Quadrupedal Robot System Technology for Monitoring, Reconnaissance, and Search Missions

Mar 2021 – JAN 2023

Agency for Defense Development (ADD)

- Generated the initial trajectory for trajectory optimization using a deep learning network, resulting in a speedup of up to 100 times

ACTIVITIES

BARAM, Kwangwoon University – Seoul, Korea

Mar 2018 - Feb 2021

Vice President (Jan 2019 – Dec 2019), **Regular Member** (Mar 2018 – Dec 2018, Jan 2020 – Feb 2021)

- Represented over 60 active members as an elected by members
- Created and showcased six robotic pieces

ADDITIONAL

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- Honors: Dean's list (Dec 2020, Jun 2019, Dec 2018), Open SW mini hackathon 3rd Prize (Nov 2020)
 - Coding: C++, Python, LaTeX, ROS, PyTorch, CasADi
 - Language Fluency: Intermediate high in English (TOEIC: 810, OPIc: IH), Native in Korean