

**JINWON KIM**  
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## EDUCATION

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**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

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**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

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**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

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**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

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**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

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**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 3<sup>rd</sup> Prize (Nov 2020)
  - Coding: C++, Python, LaTeX, ROS, PyTorch, CasADi
  - Language Fluency: Intermediate high in English (TOEIC: 810, OPIc: IH), Native in Korea