

JaeWon Lee

ROBOTICS · MULTI-ROBOT · SLAM

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"Passion is the genesis of genius."

Summary.

This is Jaewon Lee, who wants to be a Multi-Robot engineer and Cooperative Autonomous Driving engineer. I am interested in Robotics, SLAM, Multi-Robot System. I think Robotics can help the development of the world a lot. I want to study a lot and approach the world.

Research Interests

Multi-Robot Navigation, Collision Avoidance, SLAM, Pose Estimation

SLAM Visual SLAM, LiDAR SLAM

Education

KwangWoon University

Seoul, S.Korea

B.S. IN SCHOOL OF ROBOTICS

Mar. 2020 - Feb. 2024(Expected)

- Current GPA: 4.08/4.50, Current Major GPA: 4.26/4.50
- Club: BARAM Robotics (Robotics Academic Group) [2022 Vice President], Mar.2020-Present

Work Experience_

Robotics A.I. LAB. @KwangWoon Univ

Seoul, S.Kored

Undergraduate LAB Intern (Advisor: PROF. Junghyun Oh)

Jan. 2022 - Jun. 2022

- Studying Visual SLAM and Visual Odometry
- Studying Multi Robot System and implementing Multi-Robot Exploration

ROBOMATION Seoul, S.Koi

R&D INTERN Jun. 2022 - Aug. 2022

- I developed an automation system for soccer games using multi-robot.
- I carried out a development that considers the relationship between robots using Aruco Marker.

Honors & Awards

AWARDS

2022-1 **Dean's list**, for Academic Excellence

Kwangwoon Univ.

HONORS

2022-1 Full Tuition Scholarship, for Top seat last semester

Kwangwoon Univ.

Skills

Programming C++/C, Python, Matlab

DevOps ROS, Git

Framework Pytorch, Tensorflow, Keras, Unity

Extracurricular Activity _____

Technical Blog - lee-jaewon.github.io

Personal Tech Blog Jul. 2021 - Present

WRITER

• Writing posts about paper review, development, study of Interests.

• Studying through writing and sharing.

JANUARY 6, 2023 JAEWON LEE · CURRICULUM VITAE

Technical Team Blog - ropiens.tistory.com

Co-Writer Jul. 2022 - Present

• Writing posts about paper review, development, study of Interests.

· Studying through writing and sharing.

2022 Open Source Contribution Academy

Ministry of Science and ICT, NIPA

MENTEE

• Contributions to translating Pytorch Hub English documents into Korean at the Pytorch Korean User's Group.

Building a Smart Transportation System Using Multi-Robots

Kwangwoon Univ

Jul. 2022 - Oct. 2022

Capstone Design

Jan.2023 - Present

Multi Robot Collision Avoidance with Velocity Obstacle

BARAM Robotics

PERSONAL TOY PROJECT

PERSONAL TOY PROJECT

Sep.2022 - Nov.2022

• Collision Avoidance with Velocity Obstacle using multi robot.

Autonomous Driving Simulation with Reinforcement Learning

BARAM Robotics

PERSONAL TOY PROJECT

Sep.2021 - Nov.2021

 $\bullet \ \ \text{Autonomous-driving simulation through DQN Reinforcement algorithm in self-made simulator with unity.}$

• Reward management using DQN, CNN, and Laser Sensor.

• The source code for the project is in [my GitHub repository].

Frontier Based Multi-Robot Exploration

BARAM Robotics Mar.2022 - Jun.2022

Mar.2022 - Jun.2022

• Implementation of ROS-based Multi-Robot SLAM.

• Implementing Frontier Based Exploration and Allocation Algorithm.

The source code for the project is in [my GitHub repository].

2022 Deen Learning Lecture

House Interior Classifier and Automatic Recommendation

DEEP-L FARNING PROJECT

• Implementation House Interior Classifier.

This can be automatically recommended on the actual sales site with classified result.

• Using Inception-Resnet-V2 in Keras

• The source code for the project is in [my GitHub repository].

Educational Activities

AI Genius Academy Mentoring

2022 FUTURE EDUFESTA: LINK

TEACHING ASSISTANT

TEACHING ASSISTANT

Organized by Micro School, TresC3

Teaching Assistant Nov.2021

• Project Assistant with Arduino and Raspberry Pi

• Support students to experience AI and proceed with the project through a Teachable Machine.

Samsung Electronics App Development Mentoring

Organized by Micro School, TresC3

Jan.2022

• MIT App Inventor training and Project Assistant.

Association of Teachers For

Computing

Oct.2022

• Teaching Assistant of software festival with robots.