



# 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.Korea

UNDERGRADUATE LAB INTERN (ADVISOR : PROF. JUNGHYUN OH)

Jan. 2022 - Jun. 2022

- I studied visual SLAM and visual odometry
- I studied Multi-Robot system and implemented Multi-Robot exploration

### ROBOMATION

Seoul, S.Korea

R&D INTERN

Jun. 2022 - Aug. 2022

- I developed an automation system for soccer games using multi-robot.
- I developed multi-robot coordination and pose system using Aruco Marker.

## Honors & Awards

### AWARDS

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

Kwangwoon Univ.

### HONORS

2022-1 **Full Tuition Scholarship**, for the first place in 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

WRITER

Jul. 2021 - Present

- I have been writing posts about the paper review, development, the study of Interests.
- To study through writing and sharing.
- The blog is available at [\[here\]](#).

## Technical Team Blog - ropiens.tistory.com

CO-WRITER

- I have been writing posts about the paper review, development, the study of Interests.
- To study through writing and sharing.
- The blog is available at [\[here\]](#).

*Team Tech Blog*

*Jul. 2022 - Present*

## 2022 Open Source Contribution Academy

MENTEE

- I contributed to translating PyTorch Hub English documents into Korean at the PyTorch Korean User's Group.

*Ministry of Science and ICT, NIPA*

*Jul. 2022 - Oct. 2022*

## Building a Smart Transportation System Using Multi-Robots

CAPSTONE DESIGN

*Kwangwoon Univ.*

*Jan.2023 - Present*

## Multi Robot Collision Avoidance with Velocity Obstacle

PERSONAL PROJECT

- I implemented collision avoidance with Velocity Obstacle using multi-robot.
- The source code for the project is available at [\[my GitHub repository\]](#).

*BARAM Robotics*

*Sep.2022 - Nov.2022*

## Autonomous Driving Simulation with Reinforcement Learning

PERSONAL PROJECT

- I implemented an Autonomous-driving system through DQN algorithm for the high-way situation.
- I implemented a simulator with Unity. And I managed the reward using Laser Sensor.
- The source code for the project is available at [\[my GitHub repository\]](#).

*BARAM Robotics*

*Sep.2021 - Nov.2021*

## Frontier Based Multi-Robot Exploration

PERSONAL PROJECT

- I implemented ROS-based multi-robot frontier exploration.
- I implemented a multi-robot SLAM system using open sources.
- The source code for the project is available at [\[my GitHub repository\]](#).

*BARAM Robotics*

*Mar.2022 - Jun.2022*

## House Interior Classifier and Automatic Recommendation

DEEP-LEARNING PROJECT

- I implemented House Interior Classifier using Inception-Resnet-V2 in Keras.
- I implemented a system that can automatically search on the actual shopping site with the classified result.
- The source code for the project is available at [\[my GitHub repository\]](#).

*2022 Deep Learning Lecture*

*Mar.2022 - Jun.2022*

## Educational Activities

### AI Genius Academy Mentoring

TEACHING ASSISTANT

- I taught Arduino and Raspberry Pi and assisted students' AI projects.
- I taught how to use Google Teachable Machine and what is AI or Deep Learning.

*Organized by Micro School, TresC3*

*Nov.2021*

### Samsung Electronics App Development Mentoring

TEACHING ASSISTANT

- I taught MIT App Inventor and assisted students' projects.

*Organized by Micro School, TresC3*

*Jan.2022*

### 2022 FUTURE EDUFESTA : LINK

TEACHING ASSISTANT

- I taught simple robot software to children.

*Association of Teachers For*

*Computing*

*Oct.2022*