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 Exploration, Navigation, Path Planning, Collision Avoidance, Map Fusion

SLAM Visual SLAM, Visual Odometry, Optimization

Education

KwangWoon University *Seoul, S.Korea*

B.S. in School of Robotics *Mar. 2020 - Feb. 2024(Expected)*

- Current GPA : 4.06/4.50, Current Major GPA : 4.28/4.50
- 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*

- Research on Visual SLAM and Computer Vision
- Studying Visual SLAM and implementing Multi-Robot SLAM, Exploration and Path-Planning

ROBOMATION *Songpa-gu, Seoul, S.Korea*

R&D Intern *Jun. 2022 - Present*

- Research and Development Intern
- Development of Automation System for Soccer Games Using Multi-Robots and GUI for Communication.

Honors & Awards

Awards

2022 **Dean's list,** for Academic Excellence (First Place in the Spring Semester) *Kwangwoon Univ.*

Skills

Programming C++/C, Python, Matlab

DevOps ROS, Git

Framework Pytorch, Tensorflow, Keras, Unity

Languages Korean, English

Extracurricular Activity

Technical Blog - lee-jaewon.github.io *Github Blog*

Writer *Jul. 2021 - Present*

- Writing posts about paper review, development, study of Interests.
- Studying through writing and sharing.

Technical Team Blog - ropiens.tistory.com

Team Blog

Co-Writer

Jul. 2022 - Present

- Writing posts about paper review, development, study of Interests.
- Studying through writing and sharing.

Autonomous Driving Simulation with Reinforcement Learning

BARAM Robotics

Personal toy project

Sep.2021 - Nov.2021

- 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]**.

Multi-Robot Exploration

BARAM Robotics

Personal toy project

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]**.

House Interior Classifier and Automatic Recommendation

2022 Deep Learning Lecture

Deep-Learning project

Mar.2022 - Jun.2022

- 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

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

Teaching Assistant

Jan.2022

- MIT App Inventor training and Project Assistant.