Sanghyun **Park**

Autonomous Driving System · SLAM · Perception

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"Can't get anything without trying"

Summary

This is Sanghyun Park, who wants to become an 0.1% of Robotics engineer. I'm interested in Autonomous driving system of mobile robot and vehicle, Perception and SLAM. I think the more research on these technologies develops, the more convenient human life becomes. Therefore, I would like to contribute to this research.

Research Interests

Robotics Visual SLAM, Mobile Robot

Perception Moving Object Detection, Camera & LiDAR Sensor Fusion

Education

KwangWoon University *Seoul, S.Korea*

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

- **Current GPA** : 4.09/4.5, **Current Major GPA** : 4.10/4.5
- **Club** : Baram (Robotics Academic Group) - [2022 Staff]

Work Experience

Robotics & A.I. LAB @KwangWoon University *Seoul, S.Korea*

Undergraduate LAB Intern (Advisor : Prof.Junghyun Oh) *December. 2021 - August. 2022*

- Research on Visual SLAM and Computer Vision
- Studying Visual SLAM for Dynamic Environment

Skills

Programming C++/C, Python, Matlab

DevOps ROS, Git, Docker

Frameworks Pytorch

Language Korean, English

Extracurricular Activity

Basic Autonomous driving software *Baram(Robotics Academic Group)*

C++, ROS, Deeplearning *August.2021 - November.2021*

- I trained Yolov3 model for Object detection
- It was implemented to make real-time judgment by receiving the type and coordinate value of the object recognized in Yolov3 through ROS
- This project is in my Github repository : **Basic_Autonomous-Driving-Software [Link]**

Visual Odometry with image preprocessing *Robotics & A.I. LAB (KW Univ.)*

Visual Odometry, image preprocessing, python *February.2022 - February.2022*

- I implemented visual odometry based on ORB features as Python
- Image preprocessing using OpenCV
- Visual Odometry improved when applying Gaussian filter : **Result[Link]**

3D Objection Detection Projection *Baram(Robotics Academic Group)*

OpenPCDet, Numpy, ROS *March.2022 - July.2022*

- I used PointRCNN pretrained model
- Projection 3D point cloud (matching Camera Frame) using Numpy
- This project is in my Github repository : **3D-Object-Detection_to_2D_Projection [Link]**

Console game

Individual

C++

May.2021 - August.2021

- I made Console game using C++
- After learning C++, I wanted to start to program for applying object orientation.
- This project is in my Github repository : **Console_game-avoid_object [Link]**

QS Bot - Quarantine & Security Bot (On Going)

Individual

Mobile Robot, Moving Object Detection, Docking to Charging Station, SLAM, Navigation, Motor Control

September.2022 - Present

- Team Project
- My task is Moving Object Detection and Docking to Charging Station
- This project is in my Github repository : **QS - Bot [Link]**