Taeyoung **Kim**

Autonomous Driving · Robotics Perception Engineer

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"Nothing ventured, nothing gained."

Summary

This is Taeyoung Kim, who wants to become an autonomous driving or robotics Perception engineer. My research interests are Computer Vision and SLAM. I like to take on challenging tasks and I like to grow up with my colleagues around me. That's why I record and share what I did on my Github or Technical Blog. I would like to participate in changing the world with advanced science and technology.

Research Interests

Computer Vision Object Detection, Segmentation, Depth Estimation, 3D reconstruction

SLAM Visual SLAM, Visual Odometry

Education

Kwang Woon University *Seoul, S.Korea*

B.S. in School of Robotics *Mar. 2016 - Feb. 2022 (Expected)*

- **Current GPA** : 4.09 / 4.50, **Current Major GPA** : 4.40 / 4.50
- **Club**: BARAM (Robotics Academic Group) - [2020 Staff] , DAISY (English Conversation Club) - [2019 Spring President]

Work Experience

Computer Vision Lab @Korea Univ *Seoul, S.Korea*

Undergraduate Lab Intern (Advisor : Prof. Sangpil Kim) *Mar. 2021 - Jul. 2021*

- Research on Computer Vision using an Event camera
- Event data processing using ESIM

KIST(Korea Institute of Science and Technology) *Seoul, S.Korea*

Student Intern (Advisor : Dr. Kanggeon Kim) *Sep. 2020 - Feb. 2021*

- Research on Monocular Depth Estimation
- Participated in KIST disinfect robot (AI Disinfection Robot) project - **[Video]**

Image Process System Lab @Kwang Woon Univ *Seoul, S.Korea*

Undergraduate Lab Intern (Advisor : Prof. Donggyu Sim) *May. 2020 - Aug. 2020*

- Research on Image Processing based on Deep learning
- Participated in seminars related to Deep Learning and Image Processing

Publication

International Conference

2021.7 **UR2021 (Work in progress),** Taeyoung Kim, Omer Faruk Ince, JongBeom Baek, Jun-Sik Kim, KangGeon Kim, "Dense Monocular SLAM applied Depth Estimation" - **[Paper]**, **[Video]** *KROS*

Domestic Conference

2021.5 **KROS2021,** TaeHwan Kim, Taeyoung Kim, GiJae Lee, KangGeon Kim, "Recognition of disinfection targets and generation of semantic map for disinfection robot" - **[Paper]** *KROS*

2020.9 **KSPC2020,** Naseong Kwon, Taeyoung Kim, Subin Kim, Joohyung Byeon, Jongsuk Lee, Donggyu Sim, "Luma Mapping with Chroma Scaling based on CNN feature map for VVC subjective quality improvement" - **[Paper]** *IEIE*

Honors & Awards

Awards

2020.11	**Dean's List**, for Academic Excellence	*KwangWoon Univ.*
2020.9	**5th Place on B-track**, Korea Health Datathon 2020	*NAVER CLOUD PLATFORM*
2019.10	**Dean's List**, for Academic Excellence	*KwangWoon Univ.*

Honors

2021	**National Science and Engineering Undergraudate Scholarship** , for the students with excellent grades, those who have been recommended by the university	*Korea Student Aid Foundation*
2020	**National Science and Engineering Undergraudate Scholarship** , for the students with excellent grades, those who have been recommended by the university	*Korea Student Aid Foundation*
2019-2	**Full tuition Scholarship**, for Top seat last semester	*KwangWoon Univ.*

Skills

Programming	C++/C, Python, JAVA, Matlab
Framework	Pytorch, Tensorflow, Keras
DevOps	Git, Docker, ROS
Languages	Korean, English

Extracurricular Activity

Technical Blogs

Github blog

Writers — *May. 2020 - Present*

- You can easily access the blog using **[this link]**.
- Writing some posts about lecture summary, paper review, some tips for developments.
- To share what I have studied with others and to remember it longer.

CLOVA AI RUSH 2021

NAVER AI Lab, NAVER CLOVA

Participant — *May. 2021 - Jun.2021*

- Only 150 students are allowed to participate in this project.
- I developed my own deep learning model related to multi-label classification.
- I ranked 30th on Project 1-3.

2021 Spring Capstone Design

KwangWoon Univ.

Project — *Mar. 2021 - Jun.2021*

- I made a wireless charging electric vehicle charging robot.
- I designed the control input algorithm, trained deep learning model, and developed the ROS package.
- The source code related to this project is on my **[Github repository]**.

Monocular Depth Estimation with ORB-SLAM2

BARAM (Robotics Academic Group)

Personal Toy Project — *Sep. 2020 - Nov. 2020*

- I was curious about the performance of the recent depth estimation model.
- I used **'Monocular Depth Estimation with Transfer Learning pretrained MobileNetV2'** model and applied to ORB-SLAM2 also compared with ORB-SLAM2(Monocular mode), ORB-SLAM2(RGB-D mode)
- The source code related to this toy project is on my **[Github repository]**.

Runner Alarm System based on Deep Learning

BARAM (Robotics Academic Group)

Personal Toy Project — *Apr. 2020 - Jun. 2020*

- I wanted to distinguish between walking children and running children with an object detection model.
- When children are running for an amount of time, a beep sounds.
- The source code related to this toy project is on my **[Github repository]**.