Taeyun Kim

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Research Interest

3D vision, AI, graphics

My primary research interest lies in the field of 3D vision and graphics, with a specific focus on utilizing AI for 3D reconstruction of moving object from 2D image views.

Education

Barchelor of Engineering (expected in 2024.02)

- *DGIST*, Daegu, South Korea (2019.03 ~ current)
  - Major track in **Computer Science**
  - GPA: 4.05 / 4.3

FGLP (Freshmen Global Leadership Program)

- University of California, Berkeley, California, USA (2019.07-2019.08)
  - GPA: 4.3 / 4.3

Work Experience

Internship as Web Developer, CLASSUM (2022.10 ~2023.02)

- As a frontend developer for CLASSUM, I took charge of the web product interfaces, with a primary focus on feature implementation, bug resolution, and development of a text editor program to enhance the product's functionality.

Student Researcher at HASS(High-Assurance Software Systems) Lab, DGIST (2022.03~2022.06)

- I studied digital twin technology with a focus on simulating autonomous delivery drones. I researched various papers on pathfinding and aimed to test algorithms using Unity as a tool.

Student Researcher at VILS(Vehicle in Loop Simulation) Lab, DGIST (2021.09~2022.05)

- I have developed an **autonomous vehicle** and obtained a license for autonomous driving. In charge of longitudinal control, I designed and implemented the **SCC and**

AEB systems. I invested fusioning **vison data** of Mobileye and **point cloud data of** LiDAR to enhance accuracy of object detection**.**

- Researched to develop a AI model to recognize **unknown danger** (training unseen data) in road scene using **vision data.**

Internship at CSI(Cyber-Physical Systems Integration) Lab, DGIST (2021.07)

- I completed a toy project to develop a system controlling 1-DOF helicopter models using wireless communication. I utilized PID control and UDP-based communication methods.

Student Researcher at BRAIN(Brain Robot Augmented InteractioN) Lab, DGIST (2020.05~2020.12)

- I trained **machine learning and deep learning models** to predict a driver's level of sleepiness based on brain signals. I managed **entire learning process** from designing and extracting training data from raw data, constructing models, training adn analyzing the results.

Projects & Studies

Surf on Chart: Coin Trader with **Reinforcement Learning** (2022.04~2022.06)

- I trained an agent to perform coin trading using reinforcement learning algorithms such as DQN, DDQN, A2C, PPO and compared and analyzed the profitability of each model.

UGRP (Undergraduate Research Program) (2021.03~2021.11)

- Researched **indoor localization** of autonomously guided vehicles. I developed a distance-based technique for estimating location, and **LSTM networks** to study the trend of past paths and predict the next location.

Coursera/Edx Course Certificates

- **Computer Graphics** from UC San DiegoX (2022.12.18)
- **Applied Data Science with Python** from University of Michigan (2020.12.20)

Honors and Awards

Scholarship

- DGIST Presidential Fellowship (2020~current)

Quailificaitons

English qualification

- TOFEL (iBT) 105 / 120 (Available through 2023.09.04)

Technical Skills

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Very familiar with the language/library, Conducted more than one project using it, Can write code without searching references.	Familiar with the language/library, Conducted more than one project using it, Can write code with searching references and googling.	Have ever used language/library, Can comprehand the code written of it, Can write code with searching referencies and googling.

Programming Languages

- C, C++ (***)
- Python (***)

- Javascript, Typescript (***)
- Dart (**)

Frameworks / Libraries

- Scikit-learn (***)
- Keras (**)
- Pytorch (*)
- OpenCV, OpenGL (*)
- ROS (*)

- React, Redux (***)
- Flutter (**)