Lee Tae Ung

Undergraduate
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PERSONAL DATA

Born December 3, 2001 in South Korea
Contact: christy201@daum.net, 010-3425-7338
Finished military service(2021.07~2023.01)

- **ID photo**

EDUCATION

2024 ~ Present	**Studying Mechanical Engineering, Korea University** **Major : School of Mechanical Engineering** **Overall GPA: 3.89/4.5 Majors GPA: 3.93/4.5** **Earned credits: 102/130**

RESEARCH INTERESTS

Robot manipulating, Soft robotics, making sensor, motor control and manipulation using AI

PROJECT&INTERN SHIP

2025	Taking robotics(로봇공학)and mechatronics(메카트로닉스) , numerical

analysis(수치해석) university courses and also audited(청강) Data Learning and Intelligence(데이터학습과지능)

2024

Passed LG Electronics Industry-Academic Scholarship

I am accepted into the Department of Smart Convergence at Korea University, which is the contract department of LG Electronics(LG전자 고려대 계약학과 산학장학생 석사과정) .

However, I am going to **give up this opportunity** because my goal is to go to graduate school at Seoul National University.

Doing Undergraduate Research Student(학부연구생) at Korea university, LAB of professor Yongnam Song(송용남 교수님) studying skeletal tissue associated bio-mechanical engineering(2024.04.01~2024.10.01)

I was working as undergraduate research student in professor Yongnamsong's lab. I am learning how to use CAD(fusion 360, Solidworks) program. I made several CAD files about human-action mechanism and learning how to build high-complexvity device like Endoscope suturing device. Also I studied the Structure and action mechanism of the human body. And in knee gap sensor team, I participated in making Capacitor based sensor.

Doing summer-internship at Yonsei university, LAB of professor Dongjun Shin(신동준 교수님)(2024.06.10~2024.09.10)

I did internship at Yonsei university, department of AI fushion mechatronics. I was in 'Team Bigman'. Big man is a humanoid that is very big(over 4m tall), which looks similar to Robots from movie 'Avatar'. As undergraduate research student, I made robot finger using tendon-driven mechanism. Full length of finger is 30cm each and fingers are made of Oynx using 3D printer and AutoCAD(fushion 360). Also I tried to built this model using solidworks. And also I studied AI theories about reinforcement learning such as LSTM(Long Short-Term Memory), GRU(Gated Recurrent Unit), Transformer.

Build a robot that hangs from a T-rod for 1 minute

I am currently working on a major course in mechanical engineering called Creative Mechanical Design. A device was made to fix a pole that was separated by a certain distance by shooting the claws like a gun with spring-based elasticity, and then using a motor to levitate in the air.

Drone competitions and taking advantage of the ROS2 program

- It is being prepared with the goal of using the ROS2 and pixhwak language to operate the drone. Studies are underway for the 2024 Creative Flying Vehicle Competition to be held in August. I programmed using Linux and Ubuntu.

Also we made moving drone holding kiosk that can interact with people. Also, We used mujoco and Qgroundcontrol as simulator of drone

-Robot manipulation(Mujoco) study

2023 - Tutorials on the MATLAB homepage. In the case of the deep learning part, it will be conducted in the second semester
- Use the mujoco site to conduct a study to control a robot that walks on two legs
- Also, Using mujoco I made robot that walks with 4 legs too

Drone Study (using STM32 language)
- Role : Development and implementation of drone control program
- Using a 3D printer, I printed out the necessary parts, coded the program necessary for the drone to run, and ran a control program using the STM32 language.

Fushion 360, Solidworks (CAD) study
- In the course of the study of the design program called Fushion 360 and Solidsworks. We progressed from simple objects to complex objects that require loads. As a self-mission, we designed an excavator that can scoop up 1 ton and ran a simulation.

-MATLAB study
Tutorials were conducted on the official website of MetLab, and a term-project was carried out to create graphs that analyze the basic program usage methods and the actual movement of the single pendulum movement.

A project to build a robot that crosses an overpass like a monkey
-I used the fushion 360 CAD program and 3D printer to create the main body, and I used Arduino to create a robot that can cross the overpass with both arms.

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2022 Acquired Automotive Maintenance Technician Certificate(자동차정비기능사)

2021 2021.07.12~2023.01.11 Finished military service as a vehicle mechanic in the Army(육군)

2020 Admission to the School of Mechanical Engineering, Korea University

2017 Introduction to Python and C++ languages through high school information courses. Proceed with studies by solving C language problems on a C language problem solving site called ‘CodeUp’

SKILLS

Mechanism designing using CAD program(fushin360, AutoCAD, Creo, SolidWorks) and 3D printer

Programming ability using Python, ROS2, Pixhawk

Simulating using Mujoco, Qgroundcontrol

Experience about using reinforcement learning

Using Github(a little experience)