Changhun **Lee**

Robot Engineer · Firmware Software Engineer

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"Hope for the world."

Summary

I'm Changhun Lee, who want to become Wearable Robot Engineer. My research interest are wearable robot(Soft exoskelton, Hard exoskelton, etc.) for muscle strength and rehabilitation, HRI, Control System and Firmware. I would like to help disabled people with my technology and make a world where everyone can be happy.

Research Interets

Wearable Robot Soft & Hard Exoskelton

HRI Haptic

Education

KwangWoon University *Seoul, S.Korea*

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

- **Total GPA :** 4.00/4.50 **Major GPA :** 4.12/4.50
- **Club :** BARAM(Robotics Academic Group) - [2020 Club president]

Work Experience

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

Student Intern(Advisor Dr. Donghyun Hwang) *Sep. 2020 Feb. 2021*

- Research on HaptiCube.
- Research on Pose estimation with magnetic sensor
- Participate in Smartfarm auto-driving system Project

Sunduck High school *Seoul, S.Korea*

Teacher *Jun. 2020 Sep. 2020*

- Firmware Software Education(Arduino).
- 3D modeling Education.

Honors & Awards

Awards

2019.12 **Finalist,** [17th] The World Embeded Software Contest 2019 *Seoul, S.Korea*

2020.08 **3rd Place,** Cham-bit Award *Kwangwoon univ.*

2020.08 **Top,** The first semester of the third grade *Las Vegas, U.S.A*

HONORS

2020.09 **Full tuition Scholarship,** For Top seat last semester *Seoul, S.Korea*

Skills

Programming C/C++, Python, Matlab

Framework Solidworks, Catia

DevOps ROS

Languages Korean, English

Extracurricular Activity

Smart Factory with autocharge-scheduling

Seoul, S.Korea

Hardware Modeling & Design Close loop control System

May. 2019 - Dec. 2019

- 17th The World Embeded Software Contest 2019 project
- A system for efficiently operating a mobile robot used in a factory in consideration of the remaining battery, workload, etc.
- Modeling mobile robots, factory and Designing Close loop System to Control System
- The source code related to this project is on my **Github**

Smart Walker[Cham-bit award]

Seoul, S.Korea

Hardware Modeling & Design Close loop control System

Dec. 2019 - Oct. 2020

- Kwangwoon Univ.'s Cham-bit award project
- I wanted to prevent traffic accidents for the elderly..
- Walker to ensure the safety of the elderly people
- Regardless of the terrain, it speeds up at a constant speed.
- The source code related to this project is on my **Github**

Javis

Seoul, S.Korea

Personal Project

Aug. 2020 - Nov. 2020

- Mobile manipulator for helping disabled people
- To implement more diverse behaviors, The manipulator has 6DOF.
- To study ROS, all systems are implemented in ROS .
- The source code related to this project is on my **Github**

HaptiCube

Seoul, S.Korea

KIST project

Aug. 2020 - Dec. 2020

- I implement simulations for interaction between HaptiCube and people.
- Based on OpenGL, there is a version that utilizes Computer Vision and a version that is based on visual effects.
- The source code related to this project is on my **Github**

SmartFarm

Seoul, S.Korea

KIST project

Sep. 2020 - Nov. 2020

- Creating a auto-driving robot to help Korean melon farm workers.
- All systems are implemented in ROS.
- The source code related to this project is on my **Github**

Magnet Pose Estimation

Seoul, S.Korea

KIST project

Dec. 2020 - Feb. 2021

- We implement a magnet sensor system to follow the location of continuum mechanism
- The source code related to this project is on my **Github**

Publication

International

2020.12 **AIM2021,** Development of an Embedded Sensor System for a 5-DOF Finger-wearable Tactile Interface", by Byeongkyu Lim, Changhun Lee, Donghyun Hwang — *IEEE/ASME AIM*