Seongju Hong

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I am a mechanical engineer and studied robotics, system control, drones, and artificial intelligence as a detailed research area. Rather than making a society that is unconditionally fast and big with science and technology, I hope that technology will contribute to creating a better society. I am going to make challenging and innovative work with my experience and background.

Education

Bachelor of Science in Mechanical Engineering
Pohang University of Science and Technology (POSTECH)

2014-2018

Bachelor Thesis Project – Wall Climbing Car
https://www.youtube.com/watch?v=dHrL3bdTEBw

Honors & Awards

Research Project 2nd prize
POSCO's Undergraduate Creative Research Program
– Developing creative ideas on steel process technology improvement

Feb 2018

'Geekble' 1st Fellowship

Jun 2017

Faraday prize: 'Wall-Climbing Car'
POSEF (POSTECH Science and Engineering Festival)

May 2017

4th prize
2016 The 2nd Infinite Imagination MAKERS Competition

Nov 2016

1st prize, Idea-thon
Entrepreneurship POKAS (POSTECH-KAIST-SNU Eng.) Camp

Jun 2016

Professional Experiences

POSTECH Robot Club 'Power-On'
1) Project manager
2) Writing student education materials (AVR)

2014-2017

Organizing director, '1st MAKERS Competition'
National Institute for Nanomaterials Technology (NINT), POSTECH

2015-2016

Undergraduate POSCO Creative Research Program
(Engineering problems related to improvement of steel process technology)
– Development of longevity technology of steel dummy block
– Development of hot-slab edge defect inspection technology

2015-2016

Unmanned Aerial Vehicle (UAV) research project
Sponsored by POSCO: To develop creative ideas on technical problems in field

2016-2017

Research participation
(Hazardous Environment Robotics Lab. POSTECH)
2016

Coursework design of General Physics Experiment II
(PHYS104: DBL (Design & Build Physics Lab)
2016-2017
- Design of experimental program: MHD-boat
- Writing the textbook.

Assistant lecturer, "SolidWorks training Creative talent training program"
2016
KIRO (Korea Institute of Robot and Convergence)

CUop (Company-University Cooperation) Internship program
2017
- Eyepia

POSCO Challenge Internship
2017
- Rolling equipment group

Writing the lecture tutorial for students of Ho Chi Minh City University of Technology:
2017
"Introduction to 3D Modeling using Autodesk Inventor for Basic 3D Printing"

Undergraduate POSCO Creative Research Program
(related to improvement of steel process technology)
2017-2018
- Reeler facility improvement of wire winding process

Undergraduate POSCO Creative Research Program
(related to improvement of steel process technology)
2017-2018
- Reeler facility improvement of wire winding process

3rd genetation Robotic Smart Farm Project
2019-
- Project leader

Tensegrity Robotics Project for FINA 2019
(Four-legged walking horse robot using Theo jansen mechanism)
2019-
- Project leader

POSTECH Smart Campus : 78 Stairs Piano Project
2019-
- Technical Advisor

Personal Mobility(Electric Vehicle) Project
2019-
- Project leader

Robotic Construction Project
2019-
- Project leader

Leadership & Mentoring Experiences

Arduino class mentor for Pohang middle school students
2015

Mentoring in Marine Camp
2016
Gyeongju Great King, Munmu – Youth Marine Camp

Mentor in Robotics
2016
Yeongdeok Youth Reading Debate Competition

Mentor in Robotics
2016
The 2nd Korea Youth Ocean Camp

Mentor — 2016
Scientific Gifted Camp

Mentor (Mechanical Engineering) — 2017
Child Experience Camp POSTECH

Mentor — 2017
Geekble Workshop, Fab Lab Seoul

Mentor — 2017
Geekble Maker education, Pohang City

Mentor — 2018
the 3D printing program for middle school students

Mentor — 2018
Youth Future Imagination Technology Competition

Study Coach — 2019-
Studypie

Mentor — 2020
Pohang Dong High School Robot Workshop

Invited Talks

KYRS (Korean Youth Robotics Society) Seminar — 2017
To students who want to start a robot research

Agit-POSTECH Tech-Review — 2017
People attracted by other things, makers that change the world

Pohang Idong High School Maker Lecture — 2018
Makers change the world

POSTECH IoT Winter School — 2019
Understanding Digital Logic Circuits

POSTECH Special Lecture on Entrepreneurship — 2020
MAKER

Skills and Tools

Programming Language
C, C++, Python, Linux

3D Modeling & Simulation Tools
SolidWorks, Rhino, Autodesk Inventor, Autodesk FUSION 360, Autodesk eagle, MATLAB

Making Tools
Milling/Drilling Machine, Lathe Machine, CNC, 3D printer, Laser cutter

Hardware
AVR board, ARM mbed board, Arduino, Raspberry Pi, Tinker board, NVIDIA jetson, LAMPS 1.4