

# Jinhyuk Yoon

A robotics engineer who dedicates to the people.

Interested in user interaction, haptic interface, minimally invasive surgery, and business.

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[jinhyukyoon.com](http://jinhyukyoon.com)

## EXPERIENCE

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### LivsMed

Feb 2022 – Present

Robotics Engineer (Alternative military service)

Joined as a founding member of Robot R&D Department

Experience the full cycle of medical robotic product development, from R&D to mass production

Lead robot software development of STARK, a laparoscopic surgical robot system

Lead medical device software validation & verification

Serve as a Technical Research Personnel

### Medical Assistant Robotics and Cognitive Haptics Laboratory

Mar 2020 – Jan 2022

Research Assistant

Designed, controlled, and analyzed a haptic interface as the master thesis

Designed two haptic interfaces for a funded research project

Published two IEEE ToH papers, as the first and third author

Advisor: Keehoon Kim

### Korea Foundation for the Advancement of Science and Creativity

May 2016 – Dec 2020

Science Communicator

Commissioned by the minister of Ministry of Science & ICT

Introduced mechanical engineering to the public through 40+ speeches and performances

### Interaction Laboratory

Feb 2019 – Aug 2019

Undergraduate Research Assistant

Participated a research in area of haptics and human-computer interaction

Published one ACM UIST paper as the second author

Advisor: Seungmoon Choi

### Samsung Electronics

Jan 2019 – Feb 2019

Mechanical Design Intern

Worked at Digital Appliances Division, Core Component R&D Lab

Developed an interactive webpage for torque analysis supporting hinge profile design

## EDUCATION

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### Master of Science in Mechanical Engineering

2020 – 2022

Pohang University of Science and Technology

Thesis: Development of An Adaptive Planar Cable-Driven Haptic Interface to Maximize Workspace for Virtual Education Contents  
Advisor: Keehoon Kim

## Bachelor of Science in Mechanical Engineering

2014 – 2020

Pohang University of Science and Technology

Honor graduation with Magna Cum Laude

Minor in Industrial Management Engineering

Served as the 30th Student President of Department of Mechanical Engineering

Served as the 30th Chairman of Student Election Committee

Served as the 2nd Director of TEDxPOSTECH

## PUBLICATIONS

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### A Comparative Study of Physical and Haptic Exhibits in an Informal Learning Environment

Dajin Lee, Daehyeon Nam, **Jinhyuk Yoon**, Dukchan Yoon, Seokwon Jeong, Keehoon Kim, and Seungmoon Choi. *IEEE Transactions on Haptics*, Early Access.

### Cable-Driven Haptic Interface With Movable Bases Achieving Maximum Workspace and Isotropic Force Exertion

**Jinhyuk Yoon**, Donghyeon Lee, Junyong Bang, Hyung Gon Shin, Wan Kyun Chung, Seungmoon Choi, and Keehoon Kim. *IEEE Transactions on Haptics*, vol. 16, no. 3, pp. 365-378, 2023.

### Augmenting Physical Buttons with Vibrotactile Feedback for Programmable Feels

Chaeyong Park, **Jinhyuk Yoon**, Seungjae Oh, and Seungmoon Choi. In *Proceedings of the ACM Symposium on User Interface Software and Technology (UIST)*, pp. 924-937, October 20-23, 2020 (Acceptance rate 21.6%).

## AWARDS AND HONORS

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### Commission Letter

2016

Science communicator, commissioned by Minister of Ministry of Science & ICT

### Finalist

2016

Nationwide Top 11 of the 3rd FameLab Korea

### Winner

2019

The 7th POSTECH Hackathon, developed campus map android application

### Runners Up

2017

Created media artwork at the Artience Creation Challenge 30x30 hosted by British Council Korea

### Honorable Mention

2015, 2020

Introducing My Research, 3 Minutes Science Speech Contest hosted by POSTECH

### Student of the Year

2015, 2016

Pohang University of Science and Technology, Department of Mechanical Engineering

### 4th Place

2016

The 2nd POSTECH Hackathon, designed graduate school searching web platform

### Research Assistantship

2020 - 2022

Pohang University of Science and Technology

<b>Teaching Assistantship</b> Pohang University of Science and Technology	2020
<b>National Academic Excellence Scholarship</b> Full-tuition, Korea Student Aid Foundation	2016 - 2019
<b>KT&amp;G Foundation Scholarship</b> Pohang University of Science and Technology	2016
<b>Jigok Scholarship</b> Full-tuition, Pohang University of Science and Technology	2014 - 2016

## PROJECTS

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<b>Entropy</b> Media art work at 2017 Artience Creation Challenge 30x30, winning Runners Up Express ageing with entropy which measures disorder and indicates direction of time	2017
<b>Picture Science Project</b> Collaboration voluntary project with Korea National University of Arts students Boosted science interest and understanding in elementary students through drawing and toy-making Visited two children centers and met 40+ children	2016
<b>TEDxPOSTECH</b> Organized a TEDx event as a director and invited professor, writer, and pop-singer as speaker Regular application was sold out in 50 seconds after open sign-ups	2014 – 2015

## SKILLS AND TOOLS

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### Programming Language

C/C++, Python, MATLAB

### OS & Real-time control

Linux, TwinCAT, EtherCAT

### 3D Design

Solidworks