Jegyeong Ryu

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# Education

**BS** Seoul National University, Mechanical Engineering February 2020

 Major GPA 4.2/4.3 Overall GPA 4.16/4.3 (3rd place out of 166 students)

Graduated Summa Cum Laude

**MS** Seoul National University, Mechanical Engineering February 2022

Major GPA 4.15/4.3 Overall GPA 4.15/4.3

# Patents

Ryu, J., Yoon, R., Shin, D., “Public Traffic Communication System Allocating Seats Fairly, and Method for Allocating Seats In the Same,” Korea Patent, No. 1015545700000.

# Research Experience

Jeonbuk National University, Jeonju January 2015 to January 2016

**Intern**,

Heoksuk Choi, Jegyeong Ryu, Seunjae Lee, Heongseok Kim (2015). Robot Localization Using Repeating Patterns of Ceiling Images, *Annual Conference of* *The Institute of Electronics and Information Engineers*, 667-670.

**Seoul National University**, Seoul September 2018 to January 2019

**Intern**, Applied Nano & Thermal Science Lab

* Designed Human-on-a-Chip using AutoCAD
* Used laser cutter for fabrication

**Seoul National University**, Seoul July 2019 to February 2019

**Intern**, IDeALab

• Used OpenSim for musculoskeletal simulation

• Conducted motion tracking experiments

**Seoul National University**, Seoul February 2019 to Present

**Master Student**, IDeALab

• Designed mechanism by shape optimization with musculoskeletal simulation

**Jegyeong Ryu**, Seok Won Kang, Jongjun Lee, Yoon Young Kim ,“Human-in-the-loop optimization of hip assistive mechanism and control during loaded walking” in progress.

# Professional Training

**SNU in Silicon Valley**

Seoul National University Office of International Affairs, Stanford University, July 2020

Course about Design thinking, Silicon Valley, and Start-ups

# Honors and Awards

**Prize of Seoul National University Alumni President** 2020

Alumni Association of Seoul National University

**Human Resource Development Scholarship** 2020-present

Given by HYUNSONG Educational & Cultural Foundation.

**International Exchange Student Scholarship** 2019

Mirae Asset Park Hyeon Joo Foundation

**SNU in World Scholarship** 2018

Seoul National University Office of International Affairs

**National Science & Technology Scholarship** 2016-2019

Brief description

**Seol Sun Hee Scholarship** 2016

Seol Sun Hee Foundation

**Excellent Tutor Award** 2016

Faculty of Liberal Education, Seoul National University

# Languages

**Korean**: Native Language

**English**: Distinguished Listener, Advanced Speaker, Distinguished Reading and Advanced Writing (TOEFL iBT 102)

**German**: Novice Listener, Novice Speaker, Novice Reading and Writing

# Computer Skills

**Programming**: Matlab, C, C++

**Applications**: OpenSim, CoppeliaSim, SolidWorks, RecurDyn, PIAnO, AutoCAD, LabView, Hypermesh, Arduino

# Teaching Experience

**Seoul National University**, Seoul March 2016 to December 2016

**Tutor**, Department of Physics

* Explained tricky concepts in physics to 5 students: dynamics, gravity, energy, wave, electromagnetics, quantum dynamics etc.
* Got Excellent Tutor Prize

**Seoul National University**, Seoul March 2017 to June 2017

**Tutor**, Faculty of Liberal Education

* Explained hard concepts in Solid Mechanics and solved some tough questions to a student: stress, strain, axial load, torsion, bending

**Seoul National University**, Seoul March 2020 to June 2020

**Teaching Assistant**, Mechanical Engineering Department

* Solid Mechanics, an undergraduate course averaging 60 students per semester, covering the following topics: stress, strain, axial load, torsion, bending
* Developed quizzes, exams, and homework

**Seoul National University**, Seoul September 2020 to February 2021

**Tutor**, Gwanak Residence Hall

* Tutored Korean to French Master student and introduced Korean culture

**Seoul National University**, Seoul March 2021 to June 2021

**Teaching Assistant**, Mechanical Engineering Department

* Optimal Design, an undergraduate course averaging 50 students per semester, covering the following topics: constrained and unconstrained minimization problem, response surface method, underlying concept of topology optimization method
* Developed quizzes, exams, and homework

**Seoul National University**, Seoul March 2021 to August 2021

**Tutor**, Gwanak Residence Hall

* Tutored Calculus I to an undergraduate student and solved questions: series, Taylor series, vector and matrix, curve in three dimensional space