

# Kyoungyeon Choi

MECHANICAL ENGINEERING S.M. APPLICANT

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## Education

### Seoul National University (SNU)

B.S. IN MECHANICAL ENGINEERING

- Cumulative GPA: 4.1/4.3 (Major: 4.19/4.3, Upper: 4.21/4.3)
- Two years of absence to fulfill military duty (Aug. 2017 - Jul. 2019)

Seoul, S.Korea

Mar. 2015 - PRESENT

### ETH Zürich

EXCHANGE STUDENT IN MECHANICAL ENGINEERING

- GPA: 5.87/6

Zürich, Switzerland

Aug. 2019 - Feb. 2020

## Research Experience

### Bachelor's Thesis Research

ROBOTICS LABORATORY, SNU

- Advisor: Frank Chongwoo Park Prof.Dr.
- Thesis: Learning 6-dof grasping with reinforcement learning

Seoul, S.Korea

Mar. 2020 - Present

### Semester Project

ROBOTICS SYSTEMS LAB, ETH ZÜRICH

- Advisor: Hutter, Marco Prof.Dr.
- Project paper: Recovery controller for ANYmal on various terrains
- Developed recovery controller for quadruped robot "ANYmal", enabling the robot to recover and stand up on sloped terrains

Zürich, Switzerland

Aug. 2019 - Jan. 2020

### Research Intern

PHOTONICS DEVICE PHYSICS LABORATORY, YONESI UNIVERSITY

- Advisor: Kyunghwan Oh Prof.Dr.
- Research Paper: Two-mode Fiber with a Reduced Mode Overlap for Uncoupled Mode-division Multiplexing in C+L Band
- Designed a fiber optic cable that reduces mode overlap in C+L Band

Seoul, S.Korea

Dec. 2016 - Feb. 2017

## Extracurricular Activity

### Sigma Intelligence

MEMBER, SNU

- A robotics club focused on designing robots and IOT devices
- Developed footstep noise alert device using piezoelectric sensor with Arduino and ROS

Seoul, S.Korea

Mar. 2017 - Aug. 2017

## Honors & Awards

### Gwanak President Scholarship

SNU ALUMNI ASSOCIATION

- Full-tuition, 7 semester

Seoul, S.Korea

Sep. 2015 - Present

### National Mathematics Competition

GLOBAL ASSOCIATION FOR GIFTED AND TALENTED

- The first prize

Seoul, S.Korea

Nov. 2013

## Publications

- Seongjin Hong, Kyoungyeon Choi, Yong Soo Lee, and Kyunghwan Oh, "Two-mode Fiber with a Reduced Mode Overlap for Uncoupled Mode-division Multiplexing in C+L Band", Current Optics and Photonics, Vol. 2, Issue. 3, June 25, 2018.

## Skills

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**Programming** Python, Matlab, Tensorflow, C, C++, ROS, LaTeX

**3D CAD** SolidWorks

**Robot Simulation** Raisim gym, Mujoco gym, PyRep

**Physics Simulation** COMSOL Multiphysics

## Relevant Coursework

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**M2794.002700 Introduction to Robotics**, SNU

**M2794.001200 Dynamics**, SNU

**M2794.013500 Mechanical System Modeling and Control**, SNU

**400.019A Introduction to Electrical and Computer Engineering**, SNU

**Robot Dynamics**, ETH Zürich

**Dynamic Programming and Optimal Control**, ETH Zürich

**M1886.000300 Optimization Theories in Human Movements**, SNU

**M2794.008000 Advanced Mechanical Engineering Analysis**, SNU

**M2794.001700 Mechanical Product Design**, SNU

**035.001 Digital Computer Concept and Practice**, SNU

**033.014 Engineering Mathematics 1**, SNU

**033.015 Engineering Mathematics 2**, SNU

**400.003 Engineering Mathematics 3(Numerical analysis)**, SNU

**033.019 Statistics**, SNU

## Opencourse

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**Underactuated Robotics**, MIT

**CS188 Introduction to Artificial Intelligence**, UC Berkeley

**CS231n Convolutional Neural Networks for Visual Recognition**, Stanford University

**CS294-112 Deep Reinforcement Learning**, UC Berkeley