

# YOUNGWOONG CHO

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## EDUCATION

**THE COOPER UNION**, New York, NY

Bachelor of Engineering in Mechanical Engineering | Minor in Computer Science | Class of 2022 | Engineering GPA 4.0/4.0

**Korean Minjok Leadership Academy**, Hoengseong, Gangwon, Republic of Korea

Class of 2015 | Cumulative GPA 3.8/4.0

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## RELEVANT COURSES

Feedback Control Systems | Process Control Laboratory | Automotive Engineering Fundamentals | Autonomous Mobile Robots | Frequentist Machine Learning | Data Structure & Algorithms | Computer Programming for Engineering | Systems Engineering | Design & Prototyping

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## SELECTED RESEARCH & PROJECTS

**RECEIPT GRAND TOTAL EXTRACTOR**

August 2020 - October 2020

Created a simple receipt extractor application using OCR and OpenCV, and deployed the app using Google Cloud Run.

**SPLUX** | 1006 Games

December 2019 – May 2020

Made a single player and multiplayer Tetris game using Unity. SPLUX is a Tetris-based game in which blocks come down from every four directions. In multiplayer mode, players can complete the rows to score, while invading other players' zones to sabotage.

**AUTONOMOUS MOBILE ROBOTS** | ME-412: Autonomous Mobile Robots

Fall 2020

Design an autonomous mobile robot that operates with subsumption architecture and SLAM. It can roam around, detect target, and shoot a ping-pong ball to the target.

**AUTOMOTIVE ENGINEERING: PROJECT DELIVERABLE** | ME-405: Automotive Engineering

Fall 2020

Design a modern automobile, covering aspects of prime movers, aerodynamics, brakes, tires, steering, transmission, suspension and handling, chassis, and advanced hybrid powertrain concepts.

**INVERSE PENDULUM USING PID CONTROL**

September 2020 – Present

Design a PID controller that can maintain the inverse pendulum vertically upward, capable of counteracting the external disturbance.

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## EXPERIENCE

**REPUBLIC OF KOREA ARMY: 1<sup>st</sup> ENGINEER BRIGADE** | Paju, Republic of Korea

June 2017 – February 2019

Driver, Mechanic | Capable of maneuvering and repairing military vehicles, including K-511 and K-711

**SEOUL NATIONAL UNIVERSITY** | Seoul, Republic of Korea

May 2020 – July 2020

Intern at Interactive & Network Robotics Lab | Cooperative Grasping Control of Multiple Mobile Manipulators with Obstacle Avoidance

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## ACTIVITIES

**COOPER UNION MOTORSPORTS FSAE** | The Cooper Union

August 2020 – Present

DAQ in Electronics subsystem teams | Steering performance in Vehicle Dynamics subsystem teams

**KOREAN ASSOCIATION OF COOPER UNION** | The Cooper Union

August 2020 – Present

Vice President of KACU(Korean Association of Cooper Union)

**PHYSICS TEACHING ASSISTANT** | The Cooper Union

Fall 2020

Assist professors and students for Intro Physics Laboratory and Physics III: Optics & Modern Physics

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## SKILLS

**Programming Languages/Interpreters**

Python, Java, C, C#, C++, MATLAB, ROS, HTML, bash

**IDE/Editors**

Jupyter notebook, Spyder, Visual Studio, Android studio, Arduino IDE, vim

**Frameworks**

pytesseract, scikit-learn, keras, pandas, openCV(cv2), flask, numpy, scipy, sympy

**CAD**

SolidWorks, AutoCAD, Onshape, Rhino, Autodesk Revit

**Skills**

Laser Cutting, 3D Printing, Soldering, Woodcraft, Metal Casting, Milling, Drilling, Leadership