# Kyungjun Oh

Envirobotics Engineer

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## Key Skills

### Mechanical &Structural

- Structural Analysis
- Fluid Mechanics
- Mechanism Design
- CAD & 3D printing
- Control Systems Design

### Software & Robotics

- Python
- Ros2
- Arduino
- C/C++

### AI & ML

- PyTorch
- Scikit-Learn
- OpenCV
- CNN
- RNN

## Professional Summary

Versatile Mechanical Engineer and AI-powered Robotics Specialist with a robust foundation in structural analysis, mechanism design, and control systems. Skilled in integrating machine learning models into embedded platforms such as Arduino and Gazebo, and in developing computer vision algorithms using PyTorch and OpenCV. Proven track record leading multidisciplinary teams to deliver innovative automation solutions, improving operational efficiency by over 40%. Adept at environmental data analysis, fluid mechanics, and energy system design. Passionate about applying core engineering principles and AI technologies to solve complex environmental challenges and enhance industrial safety.

## Career & Education

**Senior Mechanical Engineer (Deputy Manager)**, Geesco Co., Ltd. – R&D Center (Nov 2023 – Mar 2025)

Led development and field deployment of an automated SCR catalyst cleaning robot using Arduino-based sensor nodes, C++ firmware, and custom control logic. Coordinated mechanical CAD design, embedded software, and on-site commissioning, improving cleaning efficiency by 40%.

**Intern**, Greenhouse Gas Inventory & Research Center of Korea, Ministry of Environment (Jun 2023 – Aug 2023)

Supported greenhouse gas regulation analyses with Python and Excel, generated compliance reports on emission systems and

carbon credit frameworks, and collaborated on stakeholder presentations.

## Certifications

- Industrial Safety Engineer (산업안전기사)
- Forklift Operator License (지게차운전기능사)
- Gas Tungsten Arc Welding Technician (TIG 용접 기능사)
- Air Enviroment Engineer (대기환경기사)
- General Mechanical Engineer Certification(In Progress)

**B.Eng. in Environmental Engineering**, Incheon National University (Mar 2017 – Feb 2024)
Minor: Renewable Energy Engineering

Applied MATLAB and Python for statistical analysis of air, water, and soil data; leveraged environmental chemistry and pollutant removal techniques; executed CAD modeling for water treatment and air quality monitoring prototypes.

**B.Eng. in Mechatronics Engineering** (In Progress), Academic Credit Bank System, South Korea (Aug 2024 – Jul 2026)

Studied pneumatic and electrical control systems, control engineering, C language programming, MATLAB applications, data structures, and machine shop practices.

**Doosan Robotics AI Robot Program** (In Progress), (Mar 2025 – Sep 2025)

Focused on ROS2-based AI robotics and Python programming; implemented AI-driven object detection and recognition algorithms using LiDAR and depth camera data with TensorFlow/OpenCV; configured autonomous navigation simulations in Gazebo; and developed an industrial safety detection system prototype integrating LiDAR and depth camera fusion.