YoungBin Yoon

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EDUCATION

Chonnam National University Gwangju
B.S. in Mechanical Engineering Mar.2019 – Present
- Total GPA of 3.88/4.50

WORK EXPERIENCE

Autonomous & Intelligent Robotics Lab *Advisor. Ayoung Hong*
Undergraduate research student Jan.2023 - Feb.2024
- Conducted research on driving robot arms from UR (Universal Robots) and RB (Rainbow Robotics) using the ROS 2.
- Studied data learning and predictive modeling using machine learning.

PROJECT

Emotion classification software development through facial images
Team Member Jul.2024 - Aug.2024
- Classifying human faces into 7 emotions through approximately 30,000 pieces of data.
- Face detection in images using the haarcascade pre-trained model provided by openCV.
- Developed and trained a model to track human faces in real time and classify emotions.
- Achieved 1st place.

Pick-and-Throw robot for expanding robot workspace
Team Member, Presenter Aug.2023 - Jun.2024
- Developed a model that recognizes objects, picks them, and throws them to the target point.
- Identified the trajectory of the RB robot arm, calculated the position reached when the object was thrown, and reduced the error value through experiments.
- The performance was over 95% when picking an object and 86% when throwing an object.
- Submitted an undergraduate thesis to the ICROS 2024 academic and won the undergraduate student thesis award.

Developing an object detection model using YOLOv8
Team Member Oct.2023 - Nov.2023
- Trained YOLOv8 to segment wooden blocks in real-time from a camera feed.
- Returned the centroid coordinates of the wooden block.
- Achieved 3rd place.

Predicting reservoir water level changes and Development of a hydrological operation decision support model

Team Member Jul.2023 - Aug.2023

- Forecasting today's water storage volume using a linear regression model.
- Created a model to determine manipulate the floodgates based on water storage volume.
- Achieved 1st place, exhibited results at AI TECH+ 2023 fair.

ADDITIONAL INFORMATION

Short-term Outbound Program

Brock University, St. Catharines, Canada Jul.2022 - Aug.2022

Team Leader

- Improved English skills and interacted with international students

Others

- AI robot arm TECHFIX production training Jan.2024
- 3D Modeling & Printing Training Sep.2023
- Object recognition using 3D camera Jul.2023
- Advanced Learning Algorithms Mar.2023 - May.2023
- 2022 MATLAB FUNDAMENTALS Training Dec.2022
- Chonnam National University Artificial Intelligence Hackathon Nov.2022

CERTIFICATIONS

- Azure AI Fundamentals Nov.2023

HONORS AND AWARDS

Summer Micro Competition Aug.2024
Grand Prize

ICROS 2024 Undergraduate Student Thesis Contest Jul.2024
Undergraduate Student Thesis Award

Winter Micro Competition Nov.2023
Excellence Award

3D Modeling & Printing Competition Sep.2023
Excellence Award

Summer Micro Competition Aug.2023
Grand Prize

National Graduate Science & Technology Scholarship Mar.2019 - Present

Skills

Programming Python, C, MATLAB & Simulink, ROS2, CoppeliaSim