

# Jeonghwan Ryu

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“The only way to do great work is to love what you do.”

## Education

### Chungbuk National University

B.S. IN SOFTWARE ENGINEERING, CONCENTRATION IN ARTIFICIAL INTELLIGENCE

- Total GPA of 4.11 / 4.5, Major GPA of 4.21 / 4.5 (Credits taken: 133 / 140)

Cheongju, S.Korea

Mar. 2022 - Present

## Publications

### A Lightweight Safety Helmet Compliance Detection via Multimodal Fusion

AAAI-26 STUDENT ABSTRACT AND POSTER PROGRAM (UNDER REVIEW)

- Proposed a lightweight YOLO11-pose fusion model that enhances helmet compliance detection with higher accuracy and fewer false alarms in real time.

📄 Cheongju, S.Korea

May. 2025 - Sep. 2025

## Internships

### Data Analytics Lab

UNDERGRADUATE RESEARCHER

- Conducted research on 'A Lightweight Safety Helmet Compliance Detection via Multimodal Fusion'.

Cheongju, S.Korea

Apr. 2025 - Present

## Project Experience

### Sonus : Identify and extract instruments from orchestral recordings

TEAM MEMBER

- Developed a AI-based system for extracting individual orchestra instrument sounds to support solo practice and music education.
- Used Mamba models to achieve better instrument classification results than previous approaches.

Cheongju, S.Korea

Jun. 2025 - Present

### Finflow : Managing equity portfolio risk with reinforcement learning

TEAM LEADER

- Capstone design project for graduation
- Developed a reinforcement learning model for portfolio rebalancing that mimics immune system responses.

Cheongju, S.Korea

May. 2025 - Present

### Dibidibidip : AI model for meat nutrition analysis

TEAM LEADER

- Developed an AI model to analyze nutritional facts from a photo of meat with a hand using a segmentation model and depth estimation model.
- Collected and labeled images yourself for your segmentation model.

Cheongju, S.Korea

Sep. 2024 - Dec. 2024

## Honors & Awards

### AWARDS

- |      |  |                 |
|------|--|-----------------|
| 2025 | <b>Excellence Academic Achievement Award (Spring)</b> , College of Electrical and Computer Engineering | Cheongbuk Univ. |
| 2025 | <b>3rd place</b> , Dacon Basic in predicting thyroid cancer  | Dacon           |
| 2024 | <b>Best Academic Achievement Award (Fall)</b> , College of Electrical and Computer Engineering         | Cheongbuk Univ. |
| 2024 | <b>Excellence Academic Achievement Award (Spring)</b> , College of Electrical and Computer Engineering | Cheongbuk Univ. |
| 2024 | <b>Encouragement Award</b> , 2nd Solve-up® Programming Contest   | Cheongbuk Univ. |
| 2023 | <b>Encouragement Award</b> , 2nd Solve-up® Programming Contest   | Cheongbuk Univ. |

### HONORS

- |      |  |                 |
|------|--|-----------------|
| 2025 | <b>Semester High Honors</b> , Awarded to students with high achievements throughout the semester | Cheongbuk Univ. |
| 2024 | <b>Semester High Honors</b> , Awarded to students with high achievements throughout the semester | Cheongbuk Univ. |
| 2023 | <b>Semester High Honors</b> , Awarded to students with high achievements throughout the semester | Cheongbuk Univ. |

**Program Committees**

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2024    **Certificated**, LG Aimers, 6th Cohort

*S.Korea*

**Others**

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**English Proficiency**

- 2025.08 – TEPS 378