Jeonghwan **Ryu**

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

Education

Chungbuk National University   *Cheongju, S.Korea*
B.S. in Software Engineering, Concentration in Artificial Intelligence   *Mar. 2022 - Present*
- Total GPA of 4.11 / 4.5, Major GPA of 4.21 / 4.5 (Credits taken: 133 / 140)

Publications

A Lightweight Safety Helmet Compliance Detection via Multimodal Fusion   🔗 *Cheongju, S.Korea*
AAAI-26 Student and Poster Program (Under Review)   *May. 2025 - Sep. 2025*
- Proposed a lightweight YOLO11–pose fusion model that enhances helmet compliance detection with higher accuracy and fewer false alarms in real time.

Internships

Data Analytics Lab   *Cheongju, S.Korea*
Undergraduate Researcher   *Apr. 2025 - Present*
- Conducted research on 'A Lightweight Safety Helmet Compliance Detection via Multimodal Fusion'.

Project Experience

Sonus : Identify and extract instruments from orchestral recordings   *Cheongju, S.Korea*
Team member   *Jun. 2025 - Present*
- 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.

Finflow : Managing equity portfolio risk with reinforcement learning   *Cheongju, S.Korea*
Team leader   *May. 2025 - Present*
- Capstone design project for graduation
- Developed a reinforcement learning model for portfolio rebalancing that mimics immune system responses.

Dibidibidip : AI model for meat nutrition analysis   *Cheongju, S.Korea*
Team leader   *Sep. 2024 - Dec. 2024*
- 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.

Honors & Awards

Awards

Year	Award	Org
2025	**Excellence Academic Achievement Award (Spring)**, College of Electrical and Computer Engineering	*Chungbuk Univ.*
2025	**3rd place**, Dacon Basic in predicting thyroid cancer	*Dacon*
2024	**Best Academic Achievement Award (Fall)**, College of Electrical and Computer Engineering	*Chungbuk Univ.*
2024	**Excellence Academic Achievement Award (Spring)**, College of Electrical and Computer Engineering	*Chungbuk Univ.*
2024	**Encouragement Award**, 2nd Solve-up® Programming Contest	*Chungbuk Univ.*
2023	**Encouragement Award**, 2nd Solve-up® Programming Contest	*Chungbuk Univ.*

Honors

Year	Honor	Org
2025	**Semester High Honors**, Awarded to students with high achievements throughout the semester	*Chungbuk Univ.*
2024	**Semester High Honors**, Awarded to students with high achievements throughout the semester	*Chungbuk Univ.*
2023	**Semester High Honors**, Awarded to students with high achievements throughout the semester	*Chungbuk Univ.*

Program Committees

2024   **Certificated**, LG Aimers, 6th Cohort   *S.Korea*

Others

English Proficiency

- 2025.08 – TEPS 378