

# Yubin Kim

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## RESEARCH INTERESTS

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Astrophysics, Gravitational wave, Multi-messenger astronomy, Machine learning, Data analysis

## EDUCATION

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**Ewha Womans University**, Seoul, South Korea  
Bachelor of Science in Physics  
Minors in Mathematics and Philosophy

*Mar. 2020 – Feb. 2026 (Anticipated)*  
Cumulative GPA: 3.86 / 4.30 (96.2 / 100)

### Relevant Coursework

- Astrophysics (A+, 2025)
- Particle Physics (A+, 2024)
- Computational Physics (A+, 2023)
- Numerical Analysis (2024)
- Scientific Computation Programming (2024)
- Astrodynamics (2023)

## RESEARCH EXPERIENCE

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**Undergraduate Research Intern, Computational Astrophysics Lab**  
*Ulsan National Institute of Science and Technology*  
Supervisors: Prof. Kyujin Kwak

**Ulsan, South Korea**  
*July 2025 — Present*

**Undergraduate Research Intern, Human-Centered Artificial Intelligence Lab**  
*Seoul National University*  
Supervisors: Prof. Hyunggu Jung

**Seoul, South Korea**  
*Jan. 2024 — Feb. 2025*

**Undergraduate Research Intern, Astrophysics Lab**  
*Ewha Womans University*  
Supervisors: Prof. Chunglee Kim

**Seoul, South Korea**  
*Dec. 2022 — Nov. 2023*

## PUBLICATIONS & PRESENTATIONS

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### Journal paper

- Seong, G., **Kim, Y.**, Kwak, K., Ahn, S., Park, C., Hahn, K. I., & Kim, C. (2024). 12C+12C Reaction Rates and the Evolution of a Massive Star. *Journal of The Korean Astronomical Society*, **57**(2), 115–122. (Co-first author, Published) <https://doi.org/10.5303/JKAS.2024.57.2.115>
- **Kim, Y.** & Jung, H. “Applications of Deep Learning in Gravitational Wave Data Quality Studies: A Systematic Review.” (First author, Submitted)
- **Kim, Y.**, Min, J. & Jung, H. “Capability of Multimodal Large Language Models to Describe Gravitational Wave Images.” (First author, Submitted)

### Proceeding

- **Kim, Y.**, Moon, Y., Son, J., Park, M., Min, J., & Jung, H. (2025). Analysis of the Tools for Measuring and Visualizing AI Model Carbon Emissions: A Systematic Review. *Proceedings of the HCI Korea Conference*, Gangwon, South Korea. (Oral Presentation, Co-first author)

### Presentation

## HONORS & SCHOLARSHIPS

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Undergraduate Major Leadership Scholarship, Ewha Womans University  
Korea Toray Science Foundation Scholarship  
Ewha Womans University Department of Physics Alumni Scholarship  
KB Foundation Scholarship for Basic Science  
Jicheon Scholarship, Ewha Womans University  
Dean’s List(for 5 semesters), Ewha Womans University

*Fall 2023, Fall 2024*  
*Spring 2024*  
*Spring 2022, Fall 2023*  
*Spring 2023*  
*Fall 2022, Spring 2022*  
*2021 Fall, 2022 Spring & Fall, 2023 Fall, 2024 Fall*

## EXTRACURRICULAR ACTIVITIES

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### Academic and Leadership Activities

- Participant, AstroAI Asian Network Summer School (Selected as a best group presentation) 2025
- Encouragement Award, AI-Based Learning Methods Contest, Ewha Womans University 2025
- Participant, Gravitational-Wave and Numerical Relativity Summer School 2023, 2024
- Participant, Gravitational-Wave and Numerical Relativity Winter School 2023
- Oral Presentation (1st Place), College of Natural Sciences Academic Festival, Ewha Womans University 2023
- Executive Member, Department of Physics Student Council, Ewha Womans University 2022–2023
- Member, EPAD (Ewha Physics Academic Club), Ewha Womans University 2022
- Member, ECC (Ewha Central Computer Club), Ewha Womans University 2021

### Teaching and Outreach Activities

- Private Math Tutor for High School Students, QANDA Online Tutoring Platform Mar. 2025–Present
- Peer Tutor, Ewha Womans University 2025
- High School Outreach Volunteer, Ewha Womans University 2023
- Math Tutor for High School Students, Dragon Math Academy (Part-time) June 2022 – Dec. 2022

## ENGLISH TESTS

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TOEFL iBT: 97 (R: 29, L: 25, S: 22, W: 21) June 2025  
 OPIc (Oral Proficiency Interview): IH (Intermediate High) Mar. 2025

## SKILLS

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**Programming Languages :** Python; Bash (Introductory level)

**Machine Learning Frameworks :** PyTorch, TensorFlow, Scikit-learn

**Research Tools :** LaTeX (academic writing and editing), Linux, Jupyter Notebook, GitHub