

# Yewon Han

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Github: <https://github.com/yewoonn>

Homepage: <https://yewoonn.github.io/>

## Education

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### Dongguk University

Bachelor of Computer Science Engineering  
2022.03 ~ 2026.02 (Estimated)  
GPA 4.26/4.5, Rank 11/158 (Total Credit: 115)

## Experiences

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### Interests

Explainable AI, LMM, Bioinformatics

### Research

#### Undergraduate Research Intern, AI Health Informatics Lab, Dongguk University

(Supervisor: Prof. Sangsoo Lim)

Feb 2024 – Present

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|-----------------|---|
| 11/2024-Present | <b>Pathway-augmented Differential Transformers for Drug Response Prediction</b><br>[Role] Preprocessed and Analyzed KEGG pathway and gene-drug response data; Developed AI models using differential attention for response prediction. <ul style="list-style-type: none"><li>Poster presented at RECOMB 2025 (top-tier computational biology conference)</li><li>Paper submitted to KCC 2025 (awaiting review)</li></ul> |
| 08/2024-09/2024 | <b>Developing Accurate and Trustworthy Machine Learning Force Fields for Battery Material Simulations</b><br>[Role] Analyzed atomic structure data; improved MACE framework by incorporating edge-variant graph filter. <ul style="list-style-type: none"><li>Ranked within top 10% in Samsung MLFF Challenge (Dacon)</li></ul>   |
| 05/2024-08/2024 | <b>Deep Learning for Odor Similarity Prediction in Molecular Mixtures</b><br>[Role] Constructed protein-level graphs from receptor sequence data using ProtBert embeddings; <ul style="list-style-type: none"><li>Participated in DREAM Challenge 2024</li><li>Patent application (KR 10-2025-0003146)</li></ul>  |

### Projects

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| 11/2024-12/2024 | <b>FLIP WALLET: A Reverse Budgeting App for Spending Goal Management</b><br>[Role] Frontend (HTML, CSS, JS), Designed the database schema and ERD; |
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09/2024-03/2025	<b>Designing an Accessible Kiosk System with Screen Reader Support for the Visually Impaired</b> [Role] Team Leader, Frontend (HTML, CSS, JS) <ul style="list-style-type: none"> <li>Patent application (KR 10-2025-0028145)</li> </ul>
09/2024-12/2024	<b>ToBucket: A Bucket List Management App Based on MBTI Personality Types</b> [Role] Frontend Lead (React Native), Designed user flow and class diagrams;
07/2024-09/2024	<b>Development of a Dental Disease Classification Model Using Medical Imaging</b> [Role] Data EDA on dental X-ray data and organized technical documentation.
03/2024-06/2024	<b>Teamkerbell: A Web Platform for Competition Team Matching</b> [Role] Frontend (React), Web Design (Figma)
07/2023-11/2023	<b>Exploring Strategies to Revitalize the Chungmuro Commercial District Through Student Demand Analysis</b> [Role] Data crawling via Selenium; Demand analysis using pandas; <ul style="list-style-type: none"> <li>Excellence Award, Creative Problem-Solving Project, Dongguk University</li> </ul>
03/2023-06/2023	<b>Arduino-Based Anti-Fogging Device</b> [Role] Developed Anti-Fogging Device (Arduino)

## Mentoring & Volunteer

04/2025-Present	<b>IT Mentoring Program for Special Education (Gwanghui Middle School)</b>
03/2025	<b>Competency-Building Workshops, HI-SW Volunteering Club</b>
04/2024-12/2024	<b>IT Mentoring Program for Special Education (Gyeongin Middle School)</b> <ul style="list-style-type: none"> <li>Outstanding IT Mentoring Award (Special Education Program), Seoul Association for the Rehabilitation of the Disabled</li> </ul>
09/2022-06/2023	<b>Youth Program Planner &amp; Mentor, Seoul Gangbuk Youth Center</b>

## Others

- Vice President & Planning Lead**, HI-SW IT Education Volunteering Club, Dongguk University (affiliated with the SW Education Center)

## Certifications

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Jun. 2024	SQL Developer (SQLD), Korea Data Agency
Dec. 2023	Level 2 Certificate in Intellectual Property Competency (Nationally Certified), Korea Invention Promotion Association

## Honors and Awards

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### Honors

Mar. 2024-Present	Academic Scholarship for 3 Semesters
June. 2023	Dongguk Love 1.1.1 Scholarship, Dongguk University Scholarship Foundation

### Awards

Mar. 2024-Present	Semester Honors Students for 6 Semesters
Feb. 2025	1st Place, IoT Ideathon, <i>Dongguk University COSS Group</i>
Nov. 2024	Outstanding IT Mentoring Award (Special Education Program), Seoul Association for the Rehabilitation of the Disabled
Dec. 2023	Excellence Award, Creative Problem-Solving Project, Teaching & Learning Innovation Center, Dongguk University
Sep. 2023	4th Place, Speech Contest, College of Engineering & AI Convergence College, Dongguk University

## Patents

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Lim, S., Lee, M., Lee, Y., and **Han, Y.** (2025). System and Method for Predicting Olfactory Characteristics of Odor Mixture Data.

- Application No. 10-2025-0003146 (South Korea), *Under Registration Review*

**Han, Y.**, Ahn, S., Kim, J., Joo, H., Kim, J., Kim, M., and Lee, G. (2025). Screen Reader-based Kiosk System to Improve Accessibility for the Visually Impaired.

- Application No. 10-2025-0028145 (South Korea), *Under Registration Review*

## Language Skills

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**English:** Intermediate High

- Participated in English Study Program in Wisconsin English Second Language Institute, The United States (for 2 months)
- TOEIC Speaking Intermediate High (150/200, Mar. 2025)

## Technical Skills

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- **Programming Language:** Python, Java, C
- **AI/ML:** PyTorch, Pandas, NumPy, Scikit-learn, Matplotlib, CUDA
- **Frontend:** HTML, CSS, Java Script, React, React Native
- **Design:** Figma
- **Deployment & Hosting:** Netlify, Docker
- **Collaboration Tools:** Notion, GitHub, Slack