Yewon Han

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Github: https://github.com/yewoonn

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

Tech-Blog: https://yebaaaaa.tistory.com

Education

Dongguk University

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

Experiences

Research

Undergraduate Research Intern, AI Health Informatics Lab, Dongguk University

(Supervisor: Prof. Sangsoo Lim)   Feb 2024 – Present

11/2024-Present	**Pathway-augmented Differential Transformers for Drug Response Prediction** [Role] Preprocessed and Analyzed KEGG pathway and gene-drug response data; Developed AI models using differential attention for response prediction.

- Poster presented at RECOMB 2025 (top-tier computational biology conference)
- Paper submitted to KCC 2025 (awaiting review)

08/2024-09/2024	**Developing Accurate and Trustworthy Machine Learning Force Fields for Battery Material Simulations** [Role] Analyzed atomic structure data; improved MACE framework by incorporating edge-variant graph filter.

- Ranked within top 10% in Samsung MLFF Challenge (Dacon)

05/2024-08/2024	**Deep Learning for Odor Similarity Prediction in Molecular Mixtures** [Role] Constructed protein-level graphs from receptor sequence data using ProtBert embeddings;

- Participated in DREAM Challenge 2024
- Patent application (KR 10-2025-0003146)

Projects

11/2024-12/2024	**FLIP WALLET: A Reverse Budgeting App for Spending Goal Management** [Role] Frontend (HTML, CSS, JS), Designed the database schema and ERD;

| 09/2024-03/2025 | **Designing an Accessible Kiosk System with Screen Reader Support for the Visually Impaired**
[Role] Team Leader, Frontend (HTML, CSS, JS) |

- Patent application (KR 10-2025-0028145)

| 09/2024-12/2024 | **ToBucket: A Bucket List Management App Based on MBTI Personality Types**
[Role] Frontend Lead (React Native), Designed user flow and class diagrams; |

| 07/2024-09/2024 | **Development of a Dental Disease Classification Model Using Medical Imaging**
[Role] Data EDA on dental X-ray data and organized technical documentation. |

| 03/2024-06/2024 | **Teamkerbell: A Web Platform for Competition Team Matching**
[Role] Frontend (React), Web Design (Figma) |

| 07/2023-11/2023 | **Exploring Strategies to Revitalize the Chungmuro Commercial District Through Student Demand Analysis**
[Role] Data crawling via Selenium; Demand analysis using pandas; |

- Excellence Award, Creative Problem-Solving Project, Dongguk University

| 03/2023-06/2023 | **Arduino-Based Anti-Fogging Device**
[Role] Developed Anti-Fogging Device (Arduino) |

Mentoring & Volunteer

| 04/2025-Present | **IT Mentoring Program for Special Education (Gwanghui Middle School)** |

| 03/2025 | **Competency-Building Workshops, HI-SW Volunteering Club** |

| 04/2024-12/2024 | **IT Mentoring Program for Special Education (Gyeongin Middle School)** |

- Outstanding IT Mentoring Award (Special Education Program), Seoul Association for the Rehabilitation of the Disabled

| 09/2022-06/2023 | **Youth Program Planner & Mentor, Seoul Gangbuk Youth Center** |

Others

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

Certifications

| 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

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, *Dongguk University COSS Group*
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

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

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

- **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