

Woojin Park

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<https://henrypark62.github.io>

Education

Mar 2021 – Feb 2026 **Sahmyook University, Seoul**
(Expected) **B.S., Computer Science and Engineering, Major in Software (GPA: 4.05 /4.5)**

Research Experience

Jun 2025 – Present **Big Data-Driven AI Lab (BIGBASE)**, Seoul National University of Science and Technology
Research Intern, Advisor: *Prof. Hyuk-Yoon Kwon*

Projects

Medical AI

- Jun 2025 – Present **Self-supervised Federated Learning for Diabetic Retinopathy Classification**
- A Collaborative project between Seoul National University of Science and Technology & the National Medical Center.
 - Researched a **domain-agnostic self-supervised federated learning framework** and **enhanced model explainability** using **Grad-CAM**, **IG**, **Attention rollout**.
- May 2025 – Jun 2025 **Brain MRI Tumor Detection and Visualization using DenseNet121 & Grad-CAM**
- Classified brain MRI images into three tumor types and a normal class using softmax and a fine-tuned **DenseNet121**, achieving improved accuracy.
 - Applied **Grad-CAM** to visualize tumor regions, enhancing model explainability and medical interpretability.
- May 2025 **Chest X-ray Pneumonia Detection using Fine-tuned ResNet50, Grad-CAM**
- Improved model accuracy through transfer learning and fine-tuning of **ResNet50**.
 - Visualized lesions using **Grad-CAM**.

AI-based

- Mar 2025 – Present **MindNote: AI-based Emotional Diary and Psychological Analysis Service**
- Developed a web/mobile service that analyzes user diaries using an **OpenAI-based LLM**.
 - Provided personalized sentiment and psychological feedback for mental health support.
 - Led the project as a Team Leader, managing the full project lifecycle and delivering an AI-driven sentiment analysis system.
- Mar 2025 – Jun 2025 **LLM-Based Sales Conversation Evaluation and Scoring System**
- **Software registration: C-2025-019854**
 - Industry-Academia Collaborative Capstone Project.
 - Refactored LLM prompts and developed a user interface to ensure consistent and structured output.
- May 2025 – Jun 2025 **News.ai: News Summarization and Email Delivery Service using LLM**
- Developed a web-based service that summarizes news articles using an **LLM API** and a **web crawling algorithm**, delivers the summaries via email.

SW

- Nov 2024 – Dec 2024 **Pegasus: Java-based SNS**
- Developed a web-based SNS using **Java** (JSP, Servlets, JDBC, DAO, Ajax), **MySQL**, **HTML**, **CSS**.
 - Implemented a **WebView-based Android application** using **Android Studio** and **Kotlin**.

Activities

Mar 2025 – Jun 2025 **On-Campus SW Coding Mentoring Program**
Mentor, Object Oriented Programming (Language: **Java**)

Awards

Aug 2022 **1st Prize**, On-Campus General English Course Review Contest

Qualifications

Jan 2025 **JLPT N3**