

# Kyungseo Kwon

JUNIOR, DEPARTMENT OF ARTIFICIAL INTELLIGENCE, YONSEI UNIVERSITY

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## Education

### Yonsei University

B.S. IN ARTIFICIAL INTELLIGENCE

- GPA: 3.74 / 4.3 (Overall), 3.77 / 4.3 (Major)

Seoul, S.Korea

Mar. 2022 - Expected Feb. 2026

## Research Interests

- **Medical Imaging with Deep Learning**
- **Computer Vision:** NeRF, Liif
  - Especially interested in 4D CT Scan Generation and NeRF based 4DCT Interpolation.
- **Reinforcement Learning:** Skill-prior learning
- **Multimodal Learning**
  - Trying to use modality and RL methods for better CT scan quality.

## Experience

### Medisys Lab, Yonsei University (Advisor: Prof. Jongduk Baek)

UNDERGRADUATE RESEARCH INTERN

- Have been reading and summarizing papers of Computer Vision and Medical Image field.
- Learning GPU acceleration by CUDA programming and managing the lab's GPU server.
- Recently studying to apply attention mechanism to sinogram data with my mentor, Minwoo Yu.

Seoul, S.Korea

Sep. 2023 - PRESENT

### 2024 CS / AI Yonsei - USC Summer Program

ONE OF 6 REPRESENTATIVES OF THE CS/AI UNDERGRADUATE STUDENTS

- Students were chosen by professors through English interview and academic competency.
- Attended AI and data science lectures in a two-week program at the University of Southern California (USC), supported by national funding.

California, USA

Jul. 2024 - Aug. 2024

## Course & Personal projects

### Yonsei Time Table Service (Individual, [Link](#))

FROM CCO4150: SW/AI BUSINESS DESIGNING

- Developed a user-friendly time table creation service which allows students to create schedules with no class days and find courses based on available mileage.
- Gained experience in project design, product testing and evaluation (MVT, MVP), debugging (Postman), and full-stack web development (HTML, JavaScript, CSS).
- Achieved the 2nd highest score out of 42 students in final evaluation.

Seoul, S.Korea

May. 2024 - Jun. 2024

### Low-Dose CT Scan Denoising using Neural Networks (Individual)

ASSIGNMENT TO EVALUATE UNDERGRADUATE INTERNS OF MEDISYS LAB

- Applied UNet, Red-CNN, and Uformer architectures at low-dose CT scans for denoising.
- Learned how to make high-quality PPT (add Region of Interest (ROI), etc.), image quality metrics and their differences (PSNR, SSIM), and side effect of using different upsampling methods.

Seoul, S.Korea

Oct. 2023 - Jan. 2024

### GenCruit Service (Team)

YONSEI 1ST GENAI COMPETITION

- Developed a web service (GenCruit) using GPT-4 and DALL-E APIs to generate recruitment posters for business owners.
- Performed prompt engineering and designed the web interface by Figma.
- Won the silver medal among 6 teams in final.

Seoul, S.Korea

Oct. 2023 - Dec. 2023

## Hangeul OCR Model (Team, [Link](#))

Seoul, S.Korea

FROM AAI3201: INTRODUCTION TO DEEP LEARNING THEORY AND PRACTICE

Oct. 2023 - Dec. 2023

- Made a Hangeul OCR model trained at the grapheme-level that can accurately detect full characters, due to their fixed positions.
- Improved upon previous model that were trained only with commonly-used Hangeul characters, by also detecting uncommon ones.

## Bone Segmentation using UNet (Team)

Seoul, S.Korea

ASSIGNMENT TO EVALUATE UNDERGRADUATE INTERNS OF MEDISYS LAB

Oct. 2023 - Dec. 2023

- Made bone segmentation model using UNet structure and the Mayo dataset.
- Got the best result for both qualitative and quantitative analysis among three teams. (4 students each)

## Kimchi Dataset Classification (Individual, [Link](#))

Seoul, S.Korea

FROM AAI3201: INTRODUCTION TO DEEP LEARNING THEORY AND PRACTICE

Oct. 2023 - Nov. 2023

- Made 11 class Kimchi image classifier using dataset from [AIHub](#), both in MLP and CNN.
- Focused on getting basic abilities: learned how to build neural network, compared the effect of using various loss functions and regularizations.

## Honors & Awards

2024 **Bachelor & Master's Accelerated Degree Program** Yonsei Univ.

Seoul, S.Korea

Been selected to be provided benefits like free tuition during the course.

2023 **Silver Prize** Yonsei 1st GenAI Competition

Seoul, S.Korea

Won the silver medal among 6 teams in final.

2023 **Best Tutor Award (OOP)** 2023-1 Yonsei Eagle Tutoring Program

Seoul, S.Korea

28 out of 78 teams got awarded. Evaluated by tutees' grade and steadiness.

## Teaching Experiences

2024 **Program Director** Freshman Tutoring Program (Department of AI)

Seoul, S.Korea

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Seoul, S.Korea

## Extracurricular Activities

### Yonsei GongSaRang (BallLove) Basketball Club

Seoul, S.Korea

CLUB MEMBER

Sep. 2024 - PRESENT

- Playing basketball at gym in Yonsei University every saturday morning.

### AI Freshman Tutoring Program, Yonsei University

Seoul, S.Korea

TUTOR & PROGRAM DIRECTOR

Jul. 2023 - PRESENT

- Established and currently working as the first student tutor in AI department.
- Teaching major courses: OOP, Machine Learning, Probability to Freshmen and Sophomores during summer and winter break.
- Tutors only can teach courses in which they've got A.

### Teaching & Learning Innovation Center, Yonsei University

Seoul, S.Korea

EAGLE TUTOR

Mar. 2023 - PRESENT

- Teaching OOP every first semester to students with a submajor in Computer Science.

### MintonIs Badminton Club

Seoul, S.Korea

CLUB MEMBER

Jan. 2023 - Oct. 2023

- Played badminton (doubles) with people from various universities every weekend.

## Skills

## **Computer Languages**

- C, C++, Python, Kotlin, JavaScript, HTML, CSS, MATLAB

## **Language**

- Korean: Native
- English: Intermediate (TOEIC 895 / 990)

## **Ability & Hobby**

- Flute: Played in Daeduk youth orchestra for 3 years (Nov. 2012 - Oct. 2015)
- Soccer: Center back player of A - AIDA team (department of AI, Mar.2022 - PRESENT)