Young Jin Ahn

snoop2head@kaist.ac.kr | GitHub | Google Scholar

EDUCATION

KAIST - Korea Advanced Institute of Science and Technology (Advisor: Kee-Eung Kim) Seoul, South Korea

M.S. in Artificial Intelligence; GPA: 4.17 / 4.3

September 2023 – June 2025

Yonsei University

Seoul, South Korea

B.A. in Economics & Minor in Applied Statistics; GPA: 3.81 / 4.3

March 2015 – *August* 2023

* indicates co-first author

SyncVSR: Data-Efficient Visual Speech Recognition with End-to-End Crossmodal Audio Token Synchronization

Young Jin Ahn*, Jungwoo Park*, Sangha Park, Jonghyun Choi, Kee-Eung Kim.

Interspeech 2024

Monet: Mixture of Monosemantic Experts for Transformers

Jungwoo Park*, Young Jin Ahn*, Kee-Eung Kim, Jaewoo Kang.

Under Review at ICLR 2025 (Top 5%)

Contrast with Aggregation: A Scalable Framework for Multi-View Representation Learning

HyeongJoo Hwang, Young Jin Ahn, Heesan Kong, Seokin Seo, Seunghoon Hong, Kee-Eung Kim.

Under Review at ICLR 2025 (Top 30%)

RESEARCH EXPERIENCES

Principal Investigator

September – November 2022

Personal Identifiable Information Filtering National R&D Project funded by the Ministry of Science and ICT.

- Managed a \$150,000 research fund and recruited research participants.
- Developed annotation guidelines for a privacy-focused benchmark and coordinated with data labeling companies.

Research Intern

July – August 2022

Department of Computer Science, College of Computing, Yonsei University (Advisor: Dokyung Song)

• Implemented membership inference attack methods on large language models (LLMs) and CNNs.

Research Intern January – April 2023

Department of Artificial Intelligence, College of Computing, Yonsei University (Advisor: Jonghyun Choi)

• Found failure cases of masked reconstruction models in recognizing homophones and proposed SyncVSR.

PROJECT EXPERIENCES

Multimodal Question Answering with Chest X-ray Images | GitHub

March 2024 – June 2024

Reliable question answering based on SQL queries, X-ray images and text health records.

- Achieved the first positive Reliability Score on the EHRXQA benchmark, minimizing false positives.
- Trained Multimodal Masked Autoencoder (M3AE) from scratch on 650K radiographs and text pairs.

$\textbf{DotNeuralNet} \mid \underline{\textit{GitHub}} \mid \underline{\textit{Demo}}$

March 2023

Google Developer Student Clubs Solution Challenge Global Top 100: Optical Braille recognition in the wild.

- Created the first annotated in-the-wild Braille dataset, labeled with a custom multi-label classifier.
- Built a lightweight optical Braille recognition model and a language model, achieving a BLEU score of 0.75.

KoDALLE: Text to Fashion | <u>GitHub</u>

November 2021 – January 2022

The first Korean DALLE, capable of generating dress outfit images from text prompts.

- Addressed language data scarcity with pretrained language model's embeddings for DALLE training.
- Preprocessed over 1 million image-caption pairs and trained the generative model.

COMPETITIONS

NIPA, Machine Reading Comprehension Competition | GitHub

June – July 2022

 $(2^{nd} / 26 \text{ companies})$ Developed an extractive QA system under constrained computational resources.

Ministry of Statistics, Korean Standard Industry Classification

April 2022

(7th / 311 teams) Built a sequence classification model for categorizing industries into 200 categories/sub-categories.

Dacon, KLUE Natural Language Inference Competition | GitHub

January 2022

(1st / 468 teams) Utilized typed-marker and selective sentence pooling techniques to fine-tune RoBERTa.

Dacon, Code Clone Detection Competition | GitHub

June 2022

(3rd / 337 teams) Employed ensemble encoders pretrained on disjoint datasets to identify code similarity.

Dacon, Stock Price Prediction Competition | GitHub

September 2021

(6th / 205 teams) Predicted the closing price of 376 public companies with ML models trained on financial data.

Selectstar & NIA, Corpus Proposal Competition | GitHub

September 2019 – March 2020

(3rd place) Planned and collected a multimodal dataset of emotional Instagram posts..

OPENSOURCE CONTRIBUTIONS

docker/docker.github.io | Pull Request

March – April 2020

Source repo for Docker's official documentation.

• Updated PostgreSQL initialization guideline in "Quickstart: Dockerizing Django" documentation.

NVlabs/stylegan2-ada-pytorch | Pull Request

November 2021

Source repo of NVIDIA research for StyleGAN2-ADA.

• Fixed torch version comparison fallback error.

WEB PROJECT

yonsei.exchange | GitHub | Website

July 2020 – Present

22,000 pageviews & average retention time 3 min+, website with summaries for 100 universities to study abroad.

- Collected and preprocessed students' text review data from the web.
- Visualized department distribution and weather information.
- Ranked the satisfaction level of students for each university with custom masked language model.

TECHNICAL SKILLS

Languages Python, R, JavaScript (* in the order of fluency)

Libraries PyTorch, JAX, Flax, Transformers, PyTorch Lightning, OpenCV, Docker, Django

LANGUAGE SKILLS

Korean Native

English Fluent, TOEFL iBT 110/120, served as a platoon leader at USANEC-Casey in the US Army **Chinese** Novice, HSK 4

HONORS AND AWARD

Academic Honors, Yonsei University

Spring, 2015

LEADERSHIP AND SERVICE

Founder & leader of Yonsei Indoor Bouldering Club	February 2022 – December 2022
Academic support for North Korean refugee students, 80+ hours	September 2015 – April 2016
Quantitative finance leader in Yonsei Investment Group	June 2021 – December 2021
Yonsei Vision Up academic support for high school students	March – December 2016
Military service for Republic of Korea, Senior KATUSA	September 2017 – May 2019