

Yeongbin Seo

Seoul, South Korea

Email: suhcrates111@gmail.com , suhcrates@yonsei.ac.kr

Homepage: <https://ybseo-ac.github.io/>

Github: <https://github.com/ybseo-ac/>

Research Interest : NLP, ML

My research is focused on enhancing machine learning (ML) and NLP frameworks to build self-evolving AI. I aim to implement higher-order mental capabilities within AI, drawing inspiration from human cognition. For this reason, I conducted my first research on **continual knowledge learning**, which is essential in self-evolving AI. Moreover, I worked on **self-awareness** and hallucination prediction in LMs, which enables them to detect their own errors.

With research experiences, I came to believe that self-evolution requires improvement in the **architecture of LMs**. For example, to accelerate RL in LMs, I found that the LMs need goal-orientation (bidirectional attention) and faster generation speed, which motivated my research on **diffusion LMs**. Another bottleneck is the token-level granularity, which results in the long-horizon problem. Since compressing the granularity into concept-level could address this, I am currently working on **hierarchical LMs**. I'm also open to broader topics such as embodied agents, since embodiment is essential for defining the emotions and personality of an LM.

Education

Yonsei University

Seoul, South Korea

M.S. in Artificial Intelligence

- **Advisor:** Prof. Jinyoung Yeo, Prof. Jaehyung Kim

Yonsei University

Seoul, South Korea

B.S. in Educational Sciences

- **Coursework:** Educational Psychology, Neuro-cognitive Psychology

Publications

†= advisors

Prior-based Noisy Text Data Filtering: Fast and Strong Alternative For Perplexity

ICLR 2026

main

Yeongbin Seo, Gayoung Kim, Jaehyung Kim †, Jinyoung Yeo †

[Paper] [Code]

Fast and Fluent Diffusion Language Models via Convolutional Decoding and Rejective Fine-tuning

NeurIPS 2025
Spotlight (top 3.19%)

Yeongbin Seo, Dongha Lee †, Jaehyung Kim †, Jinyoung Yeo †

[Paper] [Code]

Featured in media

Train-Attention: Meta-Learning Where to Focus in Continual Knowledge Learning

NeurIPS 2024
main

Yeongbin Seo, Dongha Lee †, Jinyoung Yeo †

[Paper] [Code]

Quantifying Self-Awareness of Knowledge in Large Language Models

Under review in ARR

Yeongbin Seo, Dongha Lee †, Jinyoung Yeo †

[Paper] [Code]

Featured in media

- Research achievement on the diffusion language model ([2025, Total 9 media of South Korea](#)) ↗
- Leading the development of news recommendation system in Dong-A Ilbo ([2023, Journalists Association of Korea](#)) ↗

Industrial Project Experience

LLM-Powered Development-Assistant Tool with LG Electronics

2024 – 2025

- Developed a developer assistance tool commissioned by LG Electronics with the following features: (1) Automated assessment of SRS (Software Requirement Specification) documents (2) Conversion of SRS documents into Test Cases (TC) (3) Conversion of Test Cases (TC) into code scripts
- Tools Used: Python, Langchain, Pytorch

RAG based chatbot with Dong-A Ilbo (One of the legacy media)

2023

- Designed and developed “AskDonga”, a Retrieval-Augmented Generation (RAG)-based chatbot.
- Tools Used: Python, Langchain, Uvicorn, Faiss, Fastapi, AWS

AI News Recommendation System with Dong-A Ilbo

2022

- [Featured in media](#) ↗
- Designed and developed an AI-based news recommendation system for the Dong-A Ilbo website.
- Tools Used: Python, SQL, redis, Nginx, AWS

Skills

Languages: Python, Java, JavaScript, C/C++

Deep Learning Frameworks and Tools: PyTorch, Langchain, BitsAndBytes

Other Job Experience

Software Engineer

Seoul, South Korea

Dong-A Ilbo

Jan 2023 – Aug 2024

- Led the planning and development of AI services based on articles for Dong-A Ilbo, South Korea’s top newspaper.

News Journalist (Data Analysis Specialist)

Seoul, South Korea

News1 → Yonhap News → Dong-A Ilbo

Dec 2018 – Jan 2023

- Worked as a journalist for major South Korean media outlets, News1, Yonhap News and Dong-A Ilbo.
- Dong-A Ilbo is one of the most prestigious media organizations in Korea ([Wikipedia](#) ↗).
- Specialized in statistical analysis articles while covering mainly the Ministry of Economy and Finance, Statistics Korea, and the financial investment industry.

Rock Band Musician

Seoul, South Korea

Band Seoyeongbin

Jan 2015 – Dec 2017

- Leader, guitarist, and composer of the underground rock band “Band Seoyeongbin”, a three-member group active in underground clubs of Hongdae.

Other-Domain Publications and Awards

A Research Report on Korean Employment Statistics Analysis

2020, 2022

- “Estimation and Analysis of Full-Time Employment”, [KERI Brief, no. 20-02, 2020](#) ↗
- “Changes in employment as seen by full-time equivalent employees”, [KERI Insight, no. 22-01, 2022](#) ↗
- Both are co-authored with Prof. Ki-seong Park (Department of Economics, Sungshin University)
- [Korea Economic Research Institute \(KERI\)](#) ↗ is one of the most prestigious economic policy think tanks in Korea.

Awarded from Big Data Analysis Competition by Statistics Korea

2019

- Data analysis on the consumption behaviors of Korean women, titled “Kim Ji-young Born in ’92, ’82, ’72, ’62, ’52”.
- Among 141 teams, only seven received awards. The competition was held by [Statistics Korea](#) ↗.