

YoonJin Oh

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Education

Korea University

Mar 2020 - present

Bachelor's degree in Business Administration (Major)

Bachelor's degree in Computer Science & Engineering (Double Major)

GPA: 4.01/4.5

Academic Interests

Computer Vision

Generative Models, Vision-Language Models, Video Understanding*

Low-source Learning

PEFT, especially Adapter and Prompt Tuning

Courseworks

Computer Science

- (Related) Artificial Intelligence, Machine Learning, Deep Learning, Natural Language Processing

- Data Structure, Algorithms, Computer Network, Computer Architecture, Operating System, Database, Discrete Mathematics, Informatics, Signal and System(=Fourier Transform)

Mathematics

- (Related) Computational Mathematics 1(=Linear Algebra)

Experiences

AIPR Lab, KAIST

Jul 2023 - Dec 2023

Undergraduate Intern (KAIRI)

Studying LLM and Parameter Efficient Fine-tuning

Advisor: Prof. KeeEung Kim

VIP Lab, SNU GSDS

Jan 2024 - Feb 2024

Google ExploreCSR Workshop Mentee

Studying Visual understanding and Diffusion model

Advisor: Prof. JoonSeok Lee

Projects

Space Recommendation and Reservation Chatbot: KU-Room

Jun 2021 - Aug 2021

torch, keras, sklearn

- Implemented a MLP(Multi-layer Perceptron)-based recommendation model.
- Implemented an item-based collaborative filtering recommendation model using Sparse SVD and content-based recommendation model using cosine similarity.

Stock Recommendation based on Corporate Sustainability

Aug 2021 - Oct 2021

sklearn, BeautifulSoup

- Visualized the data and conducted K-means clustering by trading inclination of each customer.
- Conducted sentiment analysis on news-crawling data of each corporate listed on KOSPI 300.
- Implemented a content-based recommendation model using cosine similarity.

Korean based Author-Specific Story Generation

Apr 2023 - Jun 2023

torch, transformers, koGPT

- Fine-tuned KoGPT so that it can learn the style of the writer *Park Kyung-ri* using the text data set of the novel, *Land*.
- Inserted the LoRA Adapter into the model architecture for efficient learning.

Instruct Tune LLaMA with PEFT Technique:

Efficient Language Modelling with Advanced LLaMA-Adapter

Jul 2023 - Dec 2023

torch, lightning, lit-llama, LLaMA-Adapter, LoRA

- Fine-tuned lit-llama-7B using ‘dolly-15k’ instruction dataset.
- Inserted LLaMA-Adapter into upper layer within model architecture for efficient learning.
- Changed the existing Scaled-Dot Attention mechanism to Sparse Attention to reduce the amount of computation in learning process.

Topic Modelling on Amazon Review

Sep 2023 - Oct 2023

sklearn, SentenceTransformer, umap, hdbscan, LDA, BERTopic

- Topic Modelled with *Amazon’s Product Review*’ dataset.
- Conducted performance comparison between (post-clustering) LDA and BERTopic methodologies.

Korean Few-shot Font Generation for Letter

Sep 2023 - Dec 2023

torch, mxfont, GAN, Style Transfer, OpenCV, Gradio

- Fine-tuned MXFont (pre-trained in Chinese only) using Korean TTF dataset.
- Experimented with additional noise and loss term insertion to improve the performance.
- Synthesized each character image generated by post-processing in letter form.

Scholarships and Awards

KUBS Future Talent Scholarship

Mar 2020 - present

Korea University Business School

4-year full scholarship for tuition fee awarded to those with higher admission grades.

University Volunteer Scholarship

Nov 2022

Korea University

half-year scholarship awarded to those being a leader of the college.

Korea University Smart Campus Datathon

Jun 2021 - Aug 2021

2nd place, Korea University’s Office of Digital Information

Mirae Asset Financial Big Data Festival

Aug 2021 - Nov 2021

4th place, Mirae Asset Securities Co., Ltd

SKYCC Hackathon: Pairing

May 2023 - May 2023

2nd place, union of computer clubs from Seoul National univ. Korea univ. and Yonsei univ.

Technical skills

Programming Languages	Python, C, C++
Frameworks & Tools	Pytorch, Tensorflow, Keras, scikit-learn, Docker, FastAPI, React

Language proficiencies

Korean	First Language
English	Basic (TOEIC 945)

Leadership

Vice President	The 54th student council of Korea University Business School
Vice President	The Korea University Glee Club

Extracurricular activities

Academic Society	A Korea University AI academy, <i>AIKU</i> - Various projects & studies (Diffusion, Math, etc)
Academic Society	A Korea University software development academy, <i>DevKor</i> - Various studies (MLOps, Front-end/Back-end, etc)
Production	Information platform for double-majoring KU students, <i>Kupply</i> - Product management, FE development