

# YoonJin Oh

*E-mail:* dhdbsslw@korea.ac.kr \* *Telephone number:* 010-9312-3703

*Github:* <https://github.com/dhdbsslw>

## 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 DSGS

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*

---

<b>Programming Languages</b>	Python, C, C++
<b>Frameworks &amp; Tools</b>	Pytorch, Tensorflow, Keras, scikit-learn, Docker, FastAPI, React

### *Language proficiencies*

---

<b>Korean</b>	First Language
<b>English</b>	Basic (TOEIC 945)

### *Leadership*

---

<b>Vice President</b>	The 54th student council of Korea University Business School
<b>Vice President</b>	The Korea University Glee Club

### *Extracurricular activities*

---

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