MINKYUNG KIM

Think flexiblely, Design deeply, Solve precisely
AI/ML Engineer with FE/BE/ML experiences

Sookmyung Women's University (Expected Graduation: February 2026)
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🎓 GPA: 4.36 / 4.5

SUMMARY

- I enjoy **analyzing problems from multiple perspectives** and **implementing creative solutions through technology.**
- **From planning to developing machine learning models** across various domains, and **developing & deploying both apps and servers(FE/BE/especially ML and AI)**, I have **led projects that deliver practical and valuable user value.**
- In many team settings, I've **taken on leadership roles, driving collaboration, structuring project progress, and improving overall team productivity.**

PROJECTS & MY ROLES

StarBridge | LLM & Generative Vision AI-based Pet Loss Support Service

Jan 2025 – Feb 2025

- **Built a therapeutic platform to support pet loss syndrome**
- **using RAG-based insurance chatbot + unique interactive vision AI features.**
  - Developed personalized insurance recommendation via GPT API, RAG, and Pinecone DB
  - Designed image-to-constellation pipeline using YOLO, SAM, PidiNet
  - Implemented custom pet portrait and letter generation using Dreambooth(Stable-Diffusion) fine-tuning + stylized LoRA
  - Deployed full ML pipeline on AWS EC2 GPU server
- **My Roles:**
  - ML: Pinecone DB, LangChain, Flask, AWS (EC2/S3), Docker, Github CI/CD

PillForMe | Personalized Supplement Recommendation App

Feb 2024 – Jul 2024

- **Improved recommendation accuracy by 95%**
- **with an LLM-based system + enhanced user experience via chatbot UI.**
  - Designed a RecSys based on user concerns, age, gender, and product reviews (crawled & processed & analyzed)
  - Analyzed papers and code on LLM-based RecSys to customize it for user-item data
  - Fine-tuned Llama (Ko-Alpaca) for graph-structured user-item interactions
  - Built an intuitive chatbot UI using React Native
- **My Roles:**
  - Frontend: React Native
  - ML: Pinecone DB, LangChain, LLM fine-tuning

Port Scheduler | Reinforcement Learning-Based Truck Scheduling System

Feb 2023 – Nov 2023

- **Reduced average truck waiting time by 60% through reinforcement learning**
- **published at ACK 2023 (Journal of KIISE)**
  - Collaborated with Ulsan Port Authority to analyze time-series truck arrival data
  - Modeled scheduling with Monte Carlo and Bayesian methods to reduce waiting time
  - Customized AlphaGo Zero code to implement real-time RL scheduling
  - Deployed full ML pipeline on GCP server
- **My Roles:**
  - Backend: Node.js, Firebase
  - ML: Python, PyTorch, Flask, GCP

EXPERIENCES & HONORS

- **AI Industry-Academic Internship — Ilbanbaekman Co., Ltd.** *Apr 2025 – Present*
  - Participating in an industry-academic collaboration project focused on AI (details under NDA)
- **Undergraduate Research Intern — AI Vision Lab, SMWU** *Apr 2024 – Present*
  - Conducted research and paper replication on 2D/3D model generation
  - Participated in a computer vision-based project
- **AI Industry-Academic Internship — Tutorus Labs Co., Ltd.** *Mar 2024 – Jun 2024*
  - Fine-tuned LLaMA3-8B on Korean math datasets (GSM8K) using SFT method
  - Authored performance report based on experimental results
- **AI Industry-Academic Internship — Automes Telstar Co., Ltd.** *Mar 2024 – Oct 2024*
  - Researched 3D object detection models and deployed PV-RCNN on Jetson Nano
  - Processed LiDAR sensor outputs in embedded system environments
- **GDSC Solution Challenge 2024 — Top 100 Finalist (Global)** *Jan 2024 – Apr 2024*
  - Developed an app using ML (KoBERT), GCP server, and React Native
  - Selected among global top 100 teams
- **Member & Study Team Lead — BOAZ, Big Data Research Society** *Jun 2023 – Jun 2024*
  - Operated as a team lead in the Study Division
  - Engaged in data analysis and big data-related projects
- **Published Research Paper — ACK 2023 (Journal of KIISE)** *Mar 2023 – Sep 2023*
  - **Kim, Minkyung**, Park, Sua, Lee, Haeyoung, Kim, Nayoung, and Yoo, Sangoh. “A Study on Optimal Port Truck Arrival Scheduling System Using Monte Carlo Simulation, AlphaGo Zero, and Bayesian Inference.” Proceedings of the Korean Institute of Information Scientists and Engineers (KIISE) Conference, vol. 30, no. 2, pp. 1096–1097, 2023.
  - Lee, Seongchan, Kim, Seunghan, **Kim, Minkyung**, Cho, Minjin, Ko, Beomseok, and Yoo, Yongman. “VGG-KFace: An Optimization Study on Korean Face Recognition Using VGG-Face.” Proceedings of the Korean Institute of Information Scientists and Engineers (KIISE) Conference, vol. 30, no. 2, pp. 1100–1101, 2023.
- **Top 6% Winner — DACON Object Detection Challenge** *May 2023 – Jun 2023*
  - Developed an object detection model using YOLO and Transformers
  - for maritime surveillance data
  - Achieved final standing within top 4–6%
- **Finalist (Top 2–3) — Sookmyung Hackathon** *Aug 2022*
  - Developed a university-focused SNS-style community web app
  - Designed and implemented ERD, CRUD, and follow/like features
- **Participated in Market Kurly Hackathon** *Aug 2022*
  - Implemented Frontend with React.js, styled-components
  - Designed and implemented ERD, CRUD

SKILLS

- **Front-End**: JavaScript, React.js, React Native, HTML/CSS
- **Back-End**: Flask, Django, Node.js, Spring Boot, Spring Security
- **AI/ML**: Python, Pytorch, LangChain, LLM fine-tuning(PEFT library), Stable Diffusion(diffusers library)
- **Database**: MySQL, Firebase, Oracle
- **Infra**: AWS (EC2, S3), GCP, Docker, Github CI/CD
- **Cooperation tools** : Notion, Github, Discord