Portfolio

Technical Portfolio – SHEN YINGJUN

Technical Skills

- **Programming:** Python, TypeScript, Bash
- **Deep Learning:** PyTorch
- **ML/AI:** CNN, RNN, Transformer, Detection, Diffusion Models, RAG
- **Tools:** Git/GitHub, Docker, Linux, VSCode, notion, slack
- **MLOps / Deployment:** FastAPI, Vercel
- **Data:** OpenCV, Pandas, NumPy, Pytorch

Project 1 – Food Detection by YOLO

기간: 2025.04.27 ~ 2025.06.04

링크: https://github.com/jiucai233/DSL13thEnterpriseProject,

https://www.notion.so/Jiucai-s-BLOG-22e5db4ddc1780daa138dce70b441d26?p=22e5db4ddc1780f5b447ee55b0b6df4f&pm=s

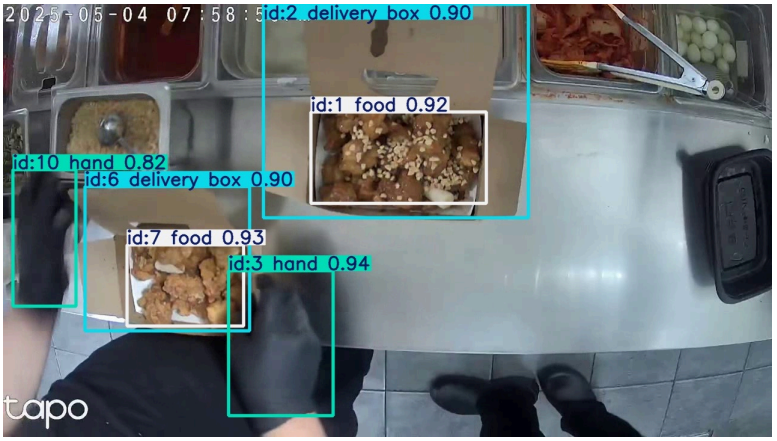
주제: Food detection system for delivery services using YOLOv8

기술 스택 / Skills: Deep Learning, PyTorch, YOLOv8, OpenCV, Model Fine-tuning, Lightweight Deployment

개인 기여: Implemented model training pipeline and fine-tuned YOLOv8 for food image detection. Developed a lightweight deployment suitable for real service environment.

성과 / 효과: Achieved ~95% detection accuracy; improved operational efficiency in identifying customer complaints.

난이도 / 기업 가치: Handled real-world image data with varying lighting and angles; demonstrated AI application for enterprise service optimization.



Project 2 – Chatbot for GLC Student Inquiries

기간: 2024.11.01 ~ 2024.12.24

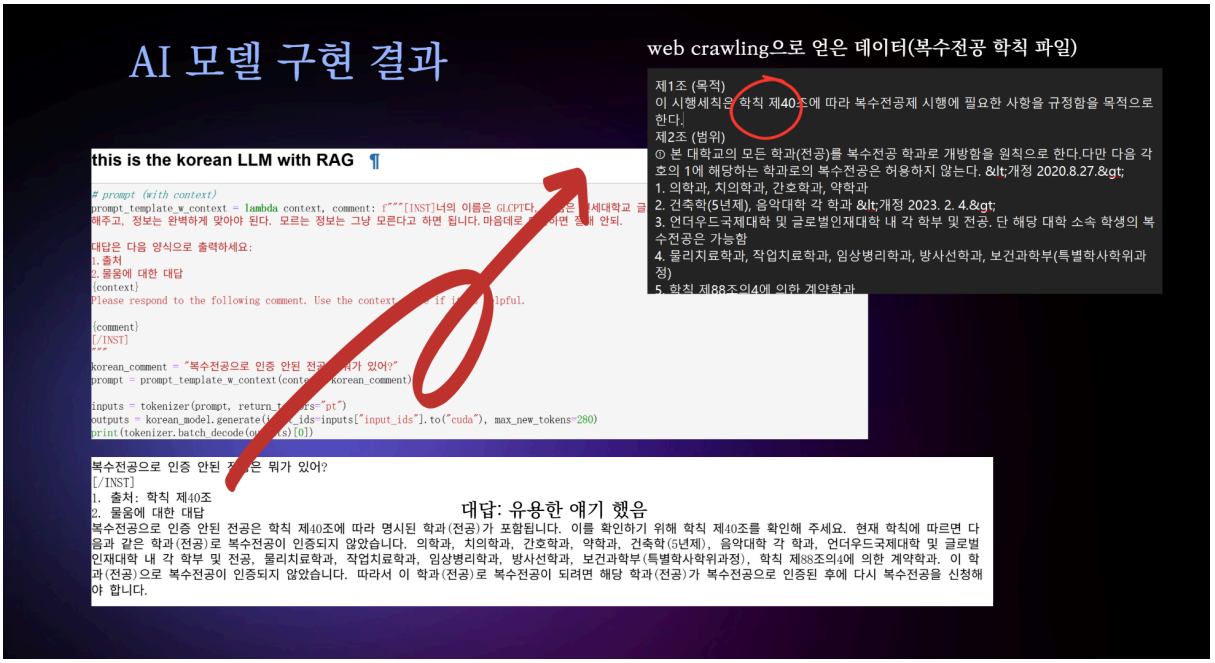
주제: Multi-language chatbot for academic regulations and FAQs

기술 스택 / Skills: Python, Notion API, Data Parsing, Rule-based NLP, Multi-language Processing (KR/EN/CN)

개인 기여: Designed chatbot framework, collected and structured data, implemented system prompt handling for unique terms.

성과 / 효과: Enabled smoother communication for international students; received max score in final project accessment

난이도 / 기업 가치: Integrated multi-language support and handled semi-structured internal data; improved student support efficiency in a diverse environment.



Project 3 – Voice Assistant using RAG

기간: 2025.08.20 ~ 2025.10.01

주제: Enterprise voice assistant for customer inquiries

기술 스택 / Skills: Deep Learning, PyTorch, STT, RAG, TTS, Web API, Frontend-Backend Integration

개인 기여: Developed AI module (STT + Graph RAG + TTS) and designed three-layer architecture; integrated AI with web backend.

성과 / 효과: Reduced repetitive inquiry load, allowing employees to focus on high-value tasks;

난이도 / 기업 가치: Built a voice-based enterprise solution handling unstructured customer queries; demonstrated scalable AI integration for business processes.

Project 4 – SCOPE: Slice-Consistent PET Reconstruction with BBDM

기간: 2025.02.12 ~ 2025.03.12

링크: https://github.com/DataScience-Lab-Yonsei/25-1_DSL_Modeling_CV_PET_Time_Reduction

주제: PET image reconstruction using Brownian Bridge Diffusion Model

기술 스택 / Skills: Deep Learning, PyTorch, BBDM, SKC, ISTA, GAN, Diffusion Models

개인 기여: Implemented slice-consistent reconstruction pipeline; applied SKC and ISTA to resolve spatial inconsistencies.

성과 / 효과: Reduced PET scan time from 20 min to 4 min while maintaining diagnostic accuracy; produced high-quality images suitable for Alzheimer's diagnosis.

난이도 / 기업 가치: Solved spatial inconsistency challenges in generative models; demonstrated advanced AI application in medical imaging with tangible clinical value.