## 김용빈

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#### **Personal Statement**

With a strong passion for Artificial Intelligence, I'm a 3rd grade student majoring in Information and Communication Engineering at Dongguk University. In addition to my major, I am studying Data Science Software as a minor and actively participating in AI research as an undergraduate researcher. Committed to continuous learning and growth, I strive to deepen my expertise and contibute to the filed of AI.

### **Education** Dongguk Univerity, Seoul, Korea

Major: Information and Communication Engineering (2023.03~)

Minor: Data Science Software(2024.03~)

#### **Certifications**

TOEIC: 900+

Microsoft Certified : Azure AI Fundamentals AI-900 (2024.01.12) Microsoft Certified : Azure Fundamentals AZ-900 (2024.01.24)

KT Certified: KT AICE Basic (2024. 07. 25)

ADsP (2024. 09. 06)

### **Technical Skills**

• Front-end: HTML, JavaScript, CSS, React

Back-end: Flask, Node.js, Sqlite3, MySQL

• AI: PyTorch, Tensorflow

• Others: Git & Github, Slack, Notion, AWS

## Work Experience

**Development of an automated hospital reception system** May – August 2021

 Development of an automation system to improve reception turnover rates in overcrowded hospitals during the COVID-19 pandemic.

- Used Skills
- Facenet, ResNet, Tensorflow
- Adafruit Fingerprint, Raspberry Pi, Flask
- HTML, JavaScript, CSS, MySQL

#### Development of a school website with improvements

July – August 2022

- Improvement and addition of features such as tags and bulletin board functions to address inconveniences on the school website
- Used Skills
- HTML, JavaScript, CSS
- Node.js, Vue.js, Vuetify
- Firebase Realtime Database, MySQL

#### LLM Korean Performance Improvements and Optimizations

June – July 2024

- Perticipate for Individual Research Course
- Optimization of Llama 3 model's Korean Language processing performance and Finetuning to maximize accuracy and efficiency
- Used Skills
- Model: Llama 3
- Fine-tuning: PEFT, DPO, QLoRA

## Development of a System for Identifying and Reporting At-Risk Children in Child Abuse August – September 2024

- Development of a Application for Identifying At-Risk Children Through Regular Selt-Assessment with a Simple Chatbot counseling
- Contribution
  - Develop a Chatbot for Counseling Children using GPT model, Prompt-Engineering, Fine-tuning.
  - Development of a page for counseling with a Chatbot

#### Multimodal sLLM Research

September – December 2024

- Perticipate for Individual Research Course
- Developing a Chatbot for Elderly People Living Alone (Voice coverstation with elders)
- Contribution
  - \* Used Model: ko-Gemma, GPT-40, KoMultiGen-General
  - Generate Multi-Turn Conversation Dataset Between Elders and System
  - Fine-tuned the ko-Gemma model and vertified its ability to generate more contextually appropriate responses.

#### Olympic Park Public Data Utilization Competition

October – November 2024

• Personalized Tour Course Recommendations based on Olympic Park visit purposes using public data

ICONICTHON November 2024

- Development of a Meal Ticket Purchase Application for University Cafeteria
- Participate Hackathon as a 'Front-end'

#### Multimodal sLM for Visual Data Analysis

December 2024 ~Still in progress

- 'Saltware' Corporate Project
- Development of a Multimodal sLM that outputs information based on given visual graphs

## Study & Education

**Naver Boostcourse Coaching Study** 

- Data Science Prijects 2024 (2024.01.11 ~ 2024.02.02)
- Let's AI 2024 (2024.05.20 ~ 2024.06.16)

### SKT AI Curriculum (2024.01.08 ~ 2024.02.02)

#### **LG** Aimers

- Completion of the 4th program, Development of a B2B sales opportunity prediction model based on MQL data ( $2024.01.02 \sim 2024.02.26$ )
- Online AI Practical Training (2024.05.01~2024.06.30)

## SK AI DATA ACADEMY Intermediate Course (2024.07.03~2024.08.14)

- Development of CCTV Image classification model
- Development of Sound classification Model for the deaf person

## **Volunteer Works & Social Activities**

Dongguk University Danvinci program 11th (2023.12~)

# Incheon Sangjeong High School, Coding Maker club Instructor (2024.04~2024.12)

- Conduct Btasic Python education
- Conduct a simple game development project using Pygame
- Conduct a Personalized Chatbot development project using Prompt-Engineering.

Participation as a Mentor in the Youth Digital Problem-Solving Project Hosted by 'Alpaco' (2024.09)

Participation as a Mentor in the Youth Digital Problem-Solving Project Hosted by 'Elice' (2024.10~2024.11)

#### **Software Club Activities**

- Dongguk University Farm System (2024.06~)
- Prometheus (2025.09~)