# JUSUNG LEE

Undergraduate Student

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### **SUMMARY**

I am a undergraduate student with a strong desire to harness the potential of artificial intelligence for the advancement and improvement of our global society. **SKILLS** 

Gumi. Korea

Languages: Python, C++, C, AVR Microcontroller Pro-

gramming

Libraries: Pytorch, Tensorflow, Pandas, scikit-learn,

Keras

#### EDUCATION -

2019- Kumoh National Institute of Technology (KIT)

The Department of Electronic Engineering

GPA: 3.27/4.5 GPA(Major): 3.75/4.5 University

### **PROJECTS**

Jan-Feb 2023 Image Classification Project

KIT AISL LAB

•For research and development of CNN models, I developed a multi-class classification CNN model using the Cifar-10 dataset, which achieved 90.8% training accuracy and 85.4% test accuracy

Apr-Jun 2023 Emotional(sentiment) classification project using Musinsa data

KIT OOP

- In this project, our team achieved first-place position
- We designed an LSTM model and achieved an accuracy of 95.6%.

Jul- Aug 2023 Summarize news and abstract keyword project

KIT SIG

- The dataset used the Naver Developer API to use the headline news source data
- $\cdot$  The sentence transformer model was used as the model used in keyword extraction
- the keyword was extracted by category using the max sum similarity algorithm

Sep- Oct 2023 Image Colorization using GAN

Meatcode

- It followed the principles outlined in the pix2pix research paper.
- The dataset employed in this project was the COCO dataset

# ON GOING PROJECTS

Object Detecton Library librarian robot to help librarians

KIT

- This project aims to develop a self driving robot designed to support Additionally, it offers assistance to library patrons, including guiding them to the specific locations of books within the library
- The robot used in the project is Transbot and the module used is NVIDIA Jetson orin NX.

Object Detecton

Robots for dealing with obstacles around Braille blocks for the visually impaired for blind people KIT

- The robot used in the project is Transbot and the module used is NVIDIA Jetson orin NX.
- The AI used Yolo v7 and will re-learn data on Braille blocks for the visually impaired and rides such as electric kickboards.

### EXPERIENCE -

Dec2022-Feb2023 AISL LAB

**Undergraduate Research Student** 

- · developed a classification network
- · received in-depth instruction in deep learning from both master's and doctoral students

Aug 2023 - CVPR LAB

**Undergraduate Research Student** 

- Review of the latest papers and implement models based on thesis
- Presentation activities after studying the basics of probability and statistics, linear algebra, and artificial intelligence

Sep 2023- METACODE

The management of the society

- $\boldsymbol{\cdot}$  The management of the Big Data and Artificial Intelligence Society
- Intern in management and consulting planning of the society

### QUALIFICATIONS

### RESEARCH INTEREST

Computer Vision Object Detection

Object detection in real time, Object detection for robot

Computer Vision Image Generaton

2D Image Generagtion, 3D Image Generaton

Computer Vision Semantic Segmentation

Video Semantic Segmentation, Image Semantic Segmentation, 3D Semantic Segmentation

### ADDITIONAL INFORMATION

## Nov 10-Nov 12 2022 Meta Code Machine Learning Course 2

· Lectures covering the fundamentals of machine learning, model implementation, and training

# Dec 23-Jan 18 2023 Fast Campus Deep Learning LEVEL RUN

• A lecture directly focusing on the implementation of deep learning models for 2D or 3D object detection, as well as 2D or 3D image classification.

### Jun 24-Jun 25 2023 Meta Code PYTHON STUDY

• A lecture that encompasses programming and essential libraries for deep learning, including Python, Pandas, and Keras

### Jul 12-Jul 14 2023 IDEC Deep Learning Foundation and Design

• A lecture aimed at facilitating comprehension and the design of the structure and principles underlying deep learning

### Sep 2023-Oct 2023 Meta Code GAN implementation

· A lecture focused on comprehending GAN and the hands-on design and implementation of GAN models

# SCHOLARSHIP AWARD HISTORY

2022-2023 National Science & Technology Scholarship from Korea Student Aid Foundation

excellent grades

2022-2023 Academic Excellence Scholarship from KIT

Higher grades compared to the previous semester

### **CLUB ACTIVITIES**

### 2019-2022 Kumoh Golden Ravens

- 2019 and 2022 Daegu Gyeongbuk National University Spring American Football League 2019 Fall League 2nd place
- · 2022 Fall League 3nd place
- 2019 National University American Football League Quarterfinals, 2022 National University League 2nd place