


# JUSUNG LEE

Undergraduate Student

 Portfolio

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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

**Languages:** Python, C++, C, AVR Microcontroller Programming

**Libraries:** Pytorch, Tensorflow, Keras, Pandas, scikit-learn, numpy

## EDUCATION

2019-	<b>Kumoh National Institute of Technology (KIT)</b> Department of Electronic Engineering GPA: 3.27/4.5 GPA(Major): 3.75/4.5	University
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## RESEARCH INTEREST

Computer Vision	<b>Object Detection</b> Object detection in real time, Object detection for robot
Computer Vision	<b>Image Generation</b> 2D Image Generation, 3D Image Generation
Computer Vision	<b>Semantic Segmentation</b> Video Semantic Segmentation, Image Semantic Segmentation, 3D Semantic Segmentation

## PROJECTS

Jan-Feb 2023	<b>Image Classification Project</b> • 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	KIT AISL LAB
Apr-Jun 2023	<b>Emotional(sentiment) classification project using Musinsa data</b> • Our team secured the top position. • We designed an LSTM model and achieved an accuracy of 95.6%.	KIT OOP
Jul- Aug 2023	<b>Summarize news and abstract keyword project</b> • Crawled data using Naver API for securing the headline news • 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	KIT SIG
Sep- Oct 2023	<b>Image Colorization using GAN</b> • The work was conducted according to the principles outlined in a research paper on pix2pix, and the dataset employed was the COCO dataset. • From initial data preprocessing to training, it was done independently.	Meatcode

## ON GOING PROJECTS

Object Detection	<b>Library librarian robot to help librarians</b> • 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.	KIT
Object Detection	<b>Robots for dealing with obstacles around Braille blocks for the visually impaired for blind people</b> • 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.	KIT

## EXPERIENCE

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- Dec2022–Feb2023 **AISL LAB** **Intern**
- developed a classification network for detect mask defects.
  - received in-depth instruction in deep learning from both master's and doctoral students
- Aug 2023 - **CVPR LAB** **Intern**
- 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** **Intern**
- The management of the Big Data and Artificial Intelligence Society
  - Intern in management and consulting planning of the society

## QUALIFICATIONS

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- JLPT N2

## ADDITIONAL INFORMATION

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- 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

## HONORS & AWARDS

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- 2022-2023 **National Science & Technology Scholarship**  
Korea Student Aid Foundation
- 2022-2023 **Academic Excellence Scholarship**  
KIT

## CLUB ACTIVITIES

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- 2019-2022 **Kumoh Golden Ravens**
- 2019 and 2022 Daegu Gyeongbuk National University Spring American Football League 2019 Fall League 2nd place
  - 2022 Fall League 3rd place
  - 2019 National University American Football League Quarterfinals, 2022 National University League 2nd place