



# Kisoo Kim

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"The important thing is an unbreakable heart."

## Education

### KwangWoon University

B.S. IN INFORMATION CONVERGENCE, MAJOR IN DATA SCIENCE

- Total GPA of 4.31 / 4.5, Major GPA of 4.32 / 4.5 (Credits taken : 127/133)

Seoul, S.Korea

Mar. 2018 - Feb. 2024 (Expected)

## Internships

### Process-Aware Data Analytics Lab

UNDERGRADUATE RESEARCHER

- Data Science research based on Process mining and Text mining
- Participated in research paper seminars

Seoul, S.Korea

July. 2022 - Present

## Project Experience

### Cosmetic recommendation application through text mining

TEAM LEADER, PRESENTER

- Capstone design project for graduation work for one semester
- Development of a system that recommends cosmetics suitable for customers through a keyword-based search function.
- Sentiment analysis has been used for showing recommendation details, implemented as app using Android Studio.

Seoul, S.Korea

Mar. 2023 - Nov. 2023 (Expected)

### Development of SW static test false alarm automatic classification system

TEAM MEMBER

- Industry-University Linkage SW Project of 2022-Fall Semester
- Analyzed given D2A data, preprocessed code data, built deep learning model to detect false alarms generated by static analysis tools.
- Studied static analysis reading paper 'A Prioritizing Security Alerts - DoD Case Study'

Seoul, S.Korea

June. 2022 - Feb. 2023

### Dacon Basic Competition, a soccer player's prospect prediction

INDIVIDUAL PROJECT

- Prediction of promising players using the ability information of players stored in FIFA 22
- Through hyperparameter tuning, ensemble and adjusting the threshold of the prediction probability, Macro F1 Score raised to 77.47%.
- Realized how to improve Macro F1 Score when there is a slight imbalance

Seoul, S.Korea

Nov. 2022

### Dacon Basic Competition, travel product application prediction

INDIVIDUAL PROJECT

- Prediction of whether to apply for travel products through basic information of customers and information related to travel products.
- Through hyperparameter tuning and stacking ensemble, the accuracy raised to 91.88%.
- Generate derived variables that have a significant effect on prediction, and select variables using feature importances.
- Studied Machine Learning Basic Algorithm (LR, RF, XGB, LGBM, ETC)

Seoul, S.Korea

Nov. 2022

### Song Recommendation system based on user's emotions

TEAM MEMBER, PRESENTER

- Term project for course True Light Design Semester of 2022-Spring semester
- Collected data through Crawling and apply sentiment analysis based on user's SNS posts using LSTM.
- Songs were recommended based on predicted emotions, and cosine similarity was used in the song recommendation process.
- Deployed as a Chrome extension for practical use

Seoul, S.Korea

Mar. 2022 - Jun. 2022

### Topic Modeling by rating for [today's house] review for self-employed students

TEAM LEADER, PRESENTER

- Term project for course Text Mining of 2022-Spring semester
- Sentiment Analysis is performed to identify positive/negative reviews and review ratings are reset based on the results of sentiment analysis.
- Topic modeling was conducted with reset review ratings, and insights were derived from important topics for each rating.

Seoul, S.Korea

April. 2022 - June. 2022

## Prediction of presence or absence of heart disease using imbalanced data

Seoul, S.Korea

TEAM LEADER, PRESENTER

April. 2022 - June. 2022

- Term project for course Machine Learning of 2022-Spring semester
- Found a preprocessing technique suitable for the data by looking for methods to replace missing values, scaling for continuous variables, and encoding methods for categorical variables.
- Studied Machine Learning model techniques such as Random Forest, LightGBM(LGBM), Support Vector Machine(SVM), and applied them to tableau data.
- Interpretation of the predictive results of the machine learning model was performed using interpretable algorithms (XAI) such as PDP, ICE, and SHAP.
- Realized that when evaluating performance, selecting suitable performance indicators for the problem to be solved, such as precision and f1 score, as well as accuracy.

## Running application development for runners

Seoul, S.Korea

INDIVIDUAL PROJECT, PRESENTER

Oct. 2021 - Dec. 2021

- Individual Project for course Mobile Programming of 2021-Fall semester
- As a motif of 'Nike Run' application, it was implemented to record running and walking separately.
- SQLiteDataBase, Intent, ListItem, MenuBar was used for measuring and searching records.

## Others

**Creation of Gwangjin-gu traffic status dashboard** (Using Python and Tableau)

**Creation of national hospitals, clinics and pharmacies dashboard** (Using Python and Tableau)

**Implementation of Algorithms to solve imbalance problem in Machine Learning** (Using PySpark)

**Analysis of the Venue network of people living in Seoul** (Using Social Network methodology)

**Development of Psychological Propensity prediction Algorithm** (DAICON, Using Python)

**Prediction of Shopping Mall review rating** (DAICON, Using Python)

**Analysis of Denver's crime rate** (Using Excel and Tableau)

## Awards & Honors

### AWARDS

2023	<b>2nd place</b> , Daicon Basic in predicting wind power generation	Dacon
2023	<b>Encouragement Award</b> , Industry-University Linkage SW Project Competition	Kwangwoon Univ.
2022	<b>3rd place</b> , Daicon Basic in predicting soccer players promising	Dacon
2022	<b>2nd place</b> , Daicon Basic in predicting travel product application	Dacon
2019	<b>Dean's List</b> , for Academic Excellence	Kwangwoon Univ.
2018	<b>Dean's List</b> , for Academic Excellence	Kwangwoon Univ.

### HONORS

2023	<b>Semester High Honors</b> , Awarded to students with high achievements throughout the semester	Kwangwoon Univ.
2022	<b>Semester High Honors</b> , Awarded to students with high achievements throughout the semester	Kwangwoon Univ.
2021	<b>Semester High Honors</b> , Awarded to students with high achievements throughout the semester	Kwangwoon Univ.
2019	<b>Semester High Honors</b> , Awarded to students with high achievements throughout the semester	Kwangwoon Univ.
2019	<b>English Excellence Scholarships</b> , Awarded to students for excellence in 'TOEIC ALL CARE' program	Kwangwoon Univ.
2018	<b>Semester High Honors</b> , Awarded to students with high achievements throughout the semester	Kwangwoon Univ.

## Extracurricular Activity

### Student Association Big Data Club BOAZ

Seoul, S.Korea

CORE MEMBER

Jan. 2023 - Jan. 2024 (Expected)

- Working as a club Member in Visualization and Analysis sessions.
- Learned Tableau for basic visualization, created a dashboard that informs the hospital and pharmacy dashboard status.
- As the Leader at the study group 'Deep Learning Basic with PyTorch', learned about the basic theory of deep learning and implemented it using PyTorch.

### Student Association presentation club SPLING 47th

Seoul, S.Korea

COORDINATOR

Jan. 2022 - June. 2022

- Served as a mentor to help members improve their presentation skills.
- As the head of the HR team, understood the internal environment from the perspective of club members and managed internal rules.

## Student Association presentation club SPLING 45th

CLUB MEMBER

Seoul, S.Korea  
Aug. 2021 - Dec. 2021

- Improved the ability for creating Powerpoint and presentation skills.
- Received an excellent completion award and a perfect attendance award while participating in club activities.

## Education Donation Program 'Sok Sok Camp'

TEAM LEADER

Seoul, S.Korea  
Aug. 2021 - Dec. 2021

- Taught coding (entry) to 6th grade students during summer vacation.
- As a team leader, planned the training curriculum and oversaw accounting and administrative tasks necessary for training.
- Learned how to improve the quality of education and the importance of communicating with team members.

# Teaching

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## J's plan Mathematics Academy

INSTRUCTOR

Seoul, S.Korea  
May. 2021 - June. 2023 (Expected)

- Taught math to middle school and high school students
- Covered all middle school math and Probability & Statistics, Calculus in preparation for college entrance exams.
- Created materials for class and prepared test questions.

## Software Summer & Vacation School

TEACHING ASSISTANT

Seoul, S.Korea  
Jan. 2022 - Feb. 2023

- Short courses of Python Programming, C Programming in Software Convergence College
- Assisted in programming practice, answered individual questions and supervised exams.

## Teaching Assistant

DISCRETE MATHEMATICS

Seoul, S.Korea  
Sep. 2022 - Dec. 2022

- Course in Department of Information Convergence for freshman
- Marked midterm and final exam, supervised exams

## Individual tutoring

INSTRUCTOR

Seoul, S.Korea  
Apr. 2018 - Oct. 2019

- Taught math to middle school and high school students
- Covered equations, functions, and sets that are the basics of high school mathematics.
- Created handmade textbook and mock exam for class.

# Skills

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**Programming** Python, R, C, Java

**Deep Learning** Skicit-learn, PyTorch, Keras, TensorFlow

**Data Analysis** Numpy, Pandas, Matplotlib, Seaborn, Tableau, NodeXL

# English Proficiency

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## Fluent in English, Native in Korean

- 2023.02 - TEPS 341
- 2018.09 - TOEIC 840