# Ki Soo Kim

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"The important thing is an unbreakable heart"

## EDUCATION

**Kwangwoon University**                                    **March. 2018 – Feb.2024 (Expected)**

*B.S. in Information Convergence, Major in Data Science*
- *Total GPA : 4.31/4.5, Major GPA of 4.32/4.5 (Credits taken : 149/133) after 2023-Spring semester*

## INTERNSHIPS

**Undergraduate Research**                                              **July. 2022 – present**

*Undergraduate Researcher in PADA(Process Aware Data Analytics) Lab*
- Data Science research based on Process mining and Text mining
- Participated in research paper seminars

## PROJECT EXPERIENCE / COMPETITION

**Dacon Basic Competition, wind power generation prediction**        **Feb. 2023 – Mar. 2023**
- Participated in a contest hosted by Dacon during 2023-Winter Vacation.
- Prediction of wind power generation based on weather information.
- Read the thesis 'Wind power generation prediction using deep learning to find out which factors of weather affect wind power generation.
- After creating a derived variable, performed scaling (minmax), used the ExtraTreesRegressor.
- As a result of the contest, I was in the 2nd place overall

**Dacon Basic Competition, a soccer player's prospect prediction**        **Nov. 2022**
- Participated in a contest hosted by Dacon during 2022-Fall Semester.
- Prediction of promising players using the ability information of players stored in FIFA 22
- Realized how to improve Macro F1 Score when there is a slight imbalance.
- Through hyperparameter tuning, ensemble and adjusting the threshold of the prediction probability, Macro F1 Score raised to 77.47%.
- As a result of the contest, I was in the 3rd place overall

**Dacon Basic Competition, travel product application prediction**        **Aug. 2022 – Sep.2022**
- Participated in a contest hosted by Dacon in 2022-summer vacation.
- Predicted whether to apply for travel products through basic information of customers and information related to travel products.
- Studied Machine Learning Basic Algorithm (LR, RF, XGB, LGBM, ETC)
- Through hyperparameter tuning and stacking ensemble, the accuracy raised to 91.88%
- As a result of the contest, I was in the 2nd place overall

### Song recommendation system based on user's emotions  Mar. 2022 – June.2022
- Term project for course True Light Design Semester of 2022-Spring semester (Team Member)
- Song data was collected through crawling and text pre-processing was performed.
- Predict emotions based on user posts on SNS and recommend songs with predicted emotions.
- To reduce sentiment prediction error, we use Cosine Similarity between SNS posts and songs.
- Deployed as a Chrome extension for practical use

### Topic Modeling by rating for [today's house] review for self-employed students
Mar. 2022 – June 2022
- Term project for course Text Mining of 2022-Spring semester (Team Leader)
- Sentiment Analysis for rescoring review rates, Topic Modeling was performed by rescoring by household.
- Extract topic insights and suggesting future direction for each rating(rescoring)
- Learned Crawling, text tokenizing and vectorization, Deep Learning Model for text classification

### Prediction of heart disease based on imbalanced data  Mar. 2022 – June. 2022
- Term project for course Machine Learning of 2022-Spring semester (Team Leader)
- Analyzed data assumed to cause heart disease using Python
- Data preprocessing(replace NA, scaling, encoding) and Compared Machine Learning Algorithm with evaluation metrics(accuracy, f1 score).
- After modeling, we interpret why the model predicted it the way it did. (XAI)
- Learned how to improve imbalance data problem in machine learning tasks.

Others

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| **Dacon Basic Competition, overseas Real Estate Monthly Rent Forecast** | **Dec. 2022** |
| **Implementation of Algorithms to solve imbalance problem in Machine Learning** | **Sep. 2022 – Dec. 2022** |
| **Analysis of the Venue network of people living in Seoul** | **Sep. 2022 – Dec.2022** |
| **Dacon Basic Competition, Shopping Mall review rating prediction (Using Python)** | **Jul. 2022** |
| **Running App development for runners (Using Android Studio)** | **Oct. 2021 – Dec. 2021** |

## EXTERNAL ACTIVITIES

### Student Association Big Data Club BOAZ  Jan. 2023 – Jan. 2024(Expected)
- Working as a club Member in visualization and analysis sessions
- Learned Tableau for visualization, created a dashboard that informs the hospital and pharmacy dashboard status
- Had time to understand and implement deep learning with PyTorch in a study in the club. As a Study Leader, I created assignments for my team members and solve the problems.

### Student Association presentation club SPLING 47th  Jan. 2022 – June. 2022
- Worked as a club management during 2022-Spring semester
- Served as a mentor to help members improve their presentation skills.
- As the head of the HR team, managed club members to keep the rules well.

### Student Association presentation club SPLING 45th  Aug. 2021 – Dec. 2021
- Worked as a club member during 2021-Fall semester
- Improved the ability to create Powerpoint and presentation skills
- Received the Perfect Attendance Award and the Outstanding Graduation Award given to those who

performed outstanding activities.

### Education Donation Program 'Sok Sok Camp'                    Apr. 2021 – Sep. 2021
- Taught coding (entry) to 6th grade students during summer vacation. (Team Leader)
- As a Team Leader, planned and managed education and oversaw accounting and filming.
- Learned how to improve the quality of education and the importance of communicating with team members.

## SKILLS

**Programming**: Python, R, JAVA, C
**Data Analysis**: Numpy, Pandas, Matplotlib, seaborn, Tableau, NodeXL, Excel
**Machine Learning & Deep Learning :** Skicit-learn, Pytorch, Keras, TensorFlow

### Language Skills

**Teps** 341 (2023.02)

## AWARDS AND HONORS

[AWARDS]

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| **2nd place in predicting wind power generation** | **2023 (Dacon)** |
| **Encouragement Prize in Industry-University Linkage SW Project** | **2023 (Kwangwoon Univ.)** |
| **3rd place in predicting soccer players promising** | **2022 (Dacon)** |
| **2nd place in predicting travel product application** | **2022 (Dacon)** |
| **Dean's list for academic excellence** | **2019 (Kwangwoon Univ.)** |
| **Dean's list for academic excellence** | **2018 (Kwangwoon Univ.)** |

[HONORS]

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|---|---|
| **Semester high Honors for high achievements throughout the semester** | **2023 (Kwangwoon Univ.)** |
| **Semester high Honors for high achievements throughout the semester** | **2022 (Kwangwoon Univ.)** |
| **Semester high Honors for high achievements throughout the semester** | **2021 (Kwangwoon Univ.)** |
| **Semester high Honors for high achievements throughout the semester** | **2019 (Kwangwoon Univ.)** |
| **Honors Scholarships for TOEIC All Care excellent scholarship** | **2019 (Kwangwoon Univ.)** |
| **Semester high Honors for high achievements throughout the semester** | **2018 (Kwangwoon Univ.)** |

### Teaching & Assistant

**Software Vacation School**                    Jan. 2023 – Feb. 2023, Feb. 2022, Jul. 2022
- Course in Department of Information Convergence for freshman
- Tutored Python Programming and C Programming

**Discrete Mathematics teaching assistant**                    Sep. 2022 – Dec. 2022
- Course in Department of Information Convergence for freshman
- Marked Mid-term and Final Exam and proctored exam

**Tutoring middle/high school students**                    May. 2018 – June. 2023
- Taught Mathematics for middle/high school students
- Created hand-made books for students and develop test questions

## CERTIFICATION

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| Dacon Basic AI Competition wind power generation prediction contest (2nd place) | Mar.2023 |
| Dacon Basic AI Competition to predict whether a soccer player will be promising (3rd place) | Nov.2022 |

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| **Dacon Basic AI Competition Travel product application prediction contest (2nd place)** | **Aug.2022** |
| **Korean History Proficiency Test Level 1** | **Apr.2021** |
| **Structured Query Language Developer(SQLD)** | **Mar.2021** |
| **Linux Master Level 2 Certification** | **Oct.2019** |