# Doyeon **Kim**

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*"Learn by Experience"*

## Education

**Seoul National University** *Seoul, S.Korea*

M.S. STUDENT IN ARTIFICIAL INTELLIGENCE *Mar. 2022 -*

- Data Mining Laboratory under the supervision of Prof. U Kang

**Kwangwoon University** *Seoul, S.Korea*

B.S. IN INFORMATION CONVERGENCE, MAJOR IN DATA SCIENCE *Mar. 2018 - Feb. 2022*

- Total GPA of 4.08 / 4.5, Major GPA of 4.16 / 4.5 (Credits taken: 137/133)

## Publication

### INTERNATIONAL

2023 **PLOS ONE**, Sooyeon Shim, Doyeon Kim, Jun-gi Jang, and U Kang *SCIE*
*Fast and Accurate Interpretation of Workload Classification Model*

### DOMESTIC

2021 **KCC2021**, Hi-Seoung Ahn, Joo-Hyun Moon, Do-Yeon Kim, Jin-Ah Kim, Yu-jin Lee. *KIISE*
*A study on User Usage Patterns using OTT Web Service Log Data*

## Internships

**Undergraduate Research** *Korea University*

FUSION DATA ANALYTICS AND ARTIFICIAL INTELLIGENCE (FDAI) LAB UNDER THE SUPERVISION OF PROF. SUNGWON HAN *Sep. 2021 - Nov. 2021*

## Project Experience

**Recommendation system for accurate project-freelance matching** *Data Mining Laboratory*

TEAM MEMBER *Apr.2023 - Dec.2023*

- Represent project/freelancer embedding using feature information rather than past matching records
- Develop a model that learns by combining the BPR loss values that passed lightGCN for each matching type

**Design of plan data collection/structure and development of plan recommender system** *Data Mining Laboratory*

TEAM MEMBER *Dec.2022 - Apr.2023*

- Joint project with Samsung Electronics
- Propose a data structure and (BPR-MF, RNN-based) recommendation algorithm for a plan recommendation system, and demonstrate the effectiveness of the technology through performance verification on virtual and real data

**Interpretation model for DRAM workload classification** *Data Mining Laboratory*

TEAM MEMBER *July.2022 - Dec.2022*

- Joint project with Samsung Electronics
- Extract interpretable features from workloads in DRAM and train a linear model for interpretation of the black-box workload classification model

**YouTube subtitles and comments analysis** *Kwangwoon University*

TEAM LEADER, PRESENTER *March.2021 - June.2021*

- Term project for course 'Text and Opinion Mining' of 2021-Spring semester
- LDA Topic modeling the subtitles of videos and categorizing the comments based on the topics, identify preferred topics by sentiment analysis, proceed Text Summarization with TextRank Algorithm

**University-industry Cooperation (NHN KCP)** *Kwangwoon University*

TEAM MEMBER *Sep.2020 - May.2021*

- Made OTT website using python django and javascript and collected web log data in database and analyzed users' usage pattern
- Dynamic menu structure was designed using a route prediction method based on user similarity and a recommendation system
- Submitted short paper at KCC2021 as a co-author

### Fake News Detections Algorithms project (Hosted by NH Investment & Securities)

TEAM LEADER

*Seoul, S.Korea*
*Oct.2020 - Jan.2021*

- Advanced to the final in 'NH Investment & Securities Big Data Competition'
- Analyzed(EDA) given news data, processed and transformed text data, studied and applied AutoML, built deep learning model for classification (Logistic Regression, RNN, CNN, etc.)
- Studied Transformer model reading paper "Attention is All You Need (NIPS 2017)", applied pre-trained Bert model

### Review-based product information platform start-up project

TEAM MEMBER

*Seoul, S.Korea*
*Aug.2020 - Nov.2020*

- Won the 1st prize($3000) in 'K-STARTUP 2020 STUDENT LEAGUE mock crowdfunding' and the 1st prize($3000) in 'KVP 4th Demo day'
- Studied Natural Language Processing (NLP) algorithms
- Performed sentiment analysis with laptops and food reviews, measured similarity between words to produce keywords synonym table, and predicted keyword scores by review and product

### 2020 Open Source Contributon

CONTRIBUTOR, COLLABORATOR

*Seoul, S.Korea*
*Aug.2020 - Sep.2020*

- Won the Special Prize($300) in '2020 Open Source Contributon' and presented at the 'Datayanolja 2020' conference
- Performed speech recognition using Tensorflow Lite, made an IOS app with the pre-trained specific sound detection model
- Reviewed Korean-English translation of our mentor's book <TinyML> and contributed to the open source by posting use cases on GitHub (https://github.com/yunho0130/tensorflow-lite)

## Awards & Honors

### AWARDS

| | | |
|---|---|---|
| 2021 | **Dean's List**, for Academic Excellence | *Kwangwoon Univ.* |
| 2020 | **1st Place**, K-STARTUP 2020 STUDENT LEAGUE mock crowdfunding | *Korea Enterpreneurship Foundation* |
| 2020 | **1st Place**, KVP 4th Demo day | *Kyunghee Univ.* |
| 2020 | **Dean's List**, for Academic Excellence | *Kwangwoon Univ.* |
| 2020 | **Special Prize**, 2020 Open Source Contributon | *Ministry of Science and ICT* |

### HONORS

| | | |
|---|---|---|
| 2021 | **Semester High Honors**, awarded to students with high achievements throughout the semester | *Kwangwoon Univ.* |
| 2021 | **Software Excellence Scholarships**, awarded to students with excellence in software | *Kwangwoon Univ.* |
| 2019 | **English Excellence Scholarships**, awarded to students with excellence in English | *Kwangwoon Univ.* |
| 2018 | **Admission Scholarships**, awarded to freshmen with excellence in admission score | *Kwangwoon Univ.* |

## Teaching

### SamSung Electronics Data Scientist Education (10th, 11th)

TEACHING ASSISTANT(TA)

*Seoul National University*
*Mar. - Apr., Aug. - Sep. 2023*

### Data Structure

TEACHING ASSISTANT(TA) FOR M1522.000900

*Seoul National University*
*Mar. 2023 - June. 2023*

## Extracurricular Activity

### Algorithm Study Group

GROUP MEMBER

*Kwangwoon University, Seoul*
*Feb. 2021 - June. 2021*

- Read the same book about the algorithm that is important and frequently used
- Prepared Coding Test for IT companies using sites Baekjoon Online Judge and Programmers
- Made Team's Github Repository and uploaded our own code and reviewed each other's code

### Smart Factory Systems and Data Management Process

PARTICIPANT

*Jeonju*
*Jan. 2021*

- Participated off-line one-week course by Innovation Center for Engineering Eduation of Jeonbuk National University
- Practiced building virtual smart factory using Festo CIROS and MES4 programs
- Analyzed and visualized field data using Power BI and made prediction model using Azure

**Exchange Student Program**                                    *Tampere University, Finland*

EXCHANGE STUDENT                                                    *Aug. 2019 - Dec. 2019*

- Took 4 Major courses and one elective class
- Joined Welcome Fair, Welcome Sauna, Campus Scavenger Hunt, School Union Trip

**International Students Mentoring Program**                    *Kwangwoon University, Seoul*

MENTOR                                                            *Mar. 2019 - July. 2019*

- Mentoring about school life, including the use of on-campus facilities
- Mentoring about Seoul life, including how to use public transportation, institution facilities, and opening bank accounts

**Korean Red Cross Youth (RCY) Volunteer Club**                          *Seoul*

MEMBER                                                            *Mar. 2016 - Dec. 2018*

- Volunteering work at a nursing home and abandoned dog shelter and cleaned school and village

## Skills

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|---|---|
| **Programming** | Python, R, C, Java, MySQL, Android, Swift |
| **Deep Learning** | Pytorch, Keras, Tensorflow |
| **Data Analysis** | Numpy, Pandas, scikit-learn, Matplotlib, Tableau |

## Language Proficiency

**Fluent in English, Native in Korean**

- 2021.07 - TEPS 369
- 2021.07 - TOEIC 945
- 2020.02 - OPIC IH