

# Doyeon Kim

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## Education

### Seoul National University

M.S., ARTIFICIAL INTELLIGENCE

- Overall GPA: 3.72 / 4.3, major GPA: 3.72 / 4.3 (credits taken: 33/24)
- Prof. U. Kang's Data Mining Laboratory

Seoul, South Korea

Mar. 2022 - Feb. 2024

### Kwangwoon University

B.S., INFORMATION CONVERGENCE, DATA SCIENCE FOCUS

- Overall GPA: 4.07 / 4.5, major GPA: 4.16 / 4.5 (credits taken: 137/133)

Seoul, South Korea

Mar. 2018 - Feb. 2022

## Publication

### INTERNATIONAL

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

SCIE

### DOMESTIC

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

KIISE

## Patent

- 2024 **10-2024-0001156**, Multi-Behavior Sequence-Aware Recommendation Method and Apparatus via Graph Convolution Network  
U Kang, **Doyeon Kim**, Saurav Tanwar

South Korea

## Research Experience

### Freelance Project Matching System

Apr. 2023 - Dec. 2023

- Created a system that matched freelancers with suitable projects using project announcements and freelance resume content more efficiently than humans
- Utilized selected, manager-recommended, and applied matching information

### Calendar-based Schedule Recommender System

Dec. 2022 - Apr. 2023

- Designed data collection for, the structure of, and the development of a schedule recommender system
- Communicated with Samsung Electronics through the report paper and requested additional data needed to develop the system
- Proposed a data structure and BPR-MF and RNN-based recommendation algorithms for a plan recommendation system

### DRAM Workload Classification Interpretation Model

July 2022 - Dec. 2022

- Extracted interpretable features from workloads in DRAM for Samsung Electronics and trained an interpretable model of the black-box workload classification model
- A paper entitled "Fast and Accurate Interpretation of Workload Classification Models" was accepted by PLOS ONE

### YouTube Subtitles and Comments Analysis

March. 2021 - June 2021

- Term project for "Text and Opinion Mining" course
- Conducted LDA topic modeling of YouTube video subtitles, categorized video comment topics, identified preferred topics by sentiment analysis, and summarized comment content using the TextRank algorithm

### University-industry Cooperation (NHN KCP Corp.)

Sept. 2020 - May. 2021

- Made an OTT website using Python, Django, and Javascript, collected web log data in a database, and analyzed users' usage patterns
- Designed a dynamic menu structure using a route prediction method based on user similarity and a recommender system
- A short paper entitled X was accepted by KCC2021 as a co-author

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

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 built deep learning model for classification (Logistic Regression, RNN, CNN, etc.)
- Studied Transformer model by reading related papers, applied pre-trained Bert model

## Review-based Product Information Platform

Aug. 2020 - Nov. 2020

- Won 1st prize worth approximately USD 3,000 in the K-STARTUP 2020 STUDENT LEAGUE mock crowdfunding competition and the 1st prize worth approximately USD 3,000 in the KVP 4th Demo Day competition
- Studied and applied Natural Language Processing (NLP) algorithms
- Performed sentiment analysis on laptops and food reviews, measured the similarity between words to produce a keyword relationship table, and predicted keyword scores by review and product

## 2020 Open Source Contributon

Aug. 2020 - Sept. 2020

- Won the Special Prize worth approximately USD 300 at the 2020 Open Source Contribution Conference and presented at the Datayanolja 2020 Conference
- Made an IOS speech-detection app with a pre-trained specific sound detection model that used Tensorflow Lite
- Reviewed Korean-English translation of "TinyML" by Yunho Maeng and posted use cases on GitHub (<https://github.com/yunho0130/tensorflow-lite>)

## Awards and Honors

### AWARDS

2023	<b>3rd Place</b> , Monthly Dacon Emotion Recognition AI Competition	<a href="#">DACON</a>
2021	<b>Dean's List</b> , for Academic Excellence	<a href="#">Kwangwoon University</a>
2020	<b>1st Place</b> , K-STARTUP 2020 STUDENT LEAGUE Mock Crowdfunding Competition	<a href="#">Korea Enterprise Foundation</a>
2020	<b>1st Place</b> , 4th KHU Valley Program(KVP)	<a href="#">Kyunghee University</a>
2020	<b>Dean's List</b> , for Academic Excellence	<a href="#">Kwangwoon University</a>
2020	<b>Special Prize</b> , 2020 Open Source Contribution Conference	<a href="#">Ministry of Science and ICT</a>

### HONORS

2021	<b>Semester High Honors</b> , high achievements throughout the semester	<a href="#">Kwangwoon University</a>
2021	<b>Software Excellence Scholarships</b> , excellence in software design	<a href="#">Kwangwoon University</a>
2019	<b>English Excellence Scholarships</b> , excellence in English	<a href="#">Kwangwoon University</a>
2018	<b>Admission Scholarships</b> , excellent admission qualifications	<a href="#">Kwangwoon University</a>

## Extracurricular Activity

### Teaching

Oct. 2022, Mar. 2023, Sept. 2023

- Helped teach data science (10th, 11th) to Samsung Electronics employees
- Served as a teaching assistant for undergraduate "Data Structure" class (M1522.000900)
- Taught Woori Bank employees about database management

### Algorithm Study Group

Feb. 2021 - June 2021

- Recruited other students from my department to review data structure and algorithm and select a suitable algorithm book
- Prepared coding tests for IT companies using Baekjoon Online Judge and Programmers websites
- Created a team Github repository where we uploaded and reviewed each other's code

### Exchange Student Program in Tampere University, Finland

Aug. 2019 - Dec. 2019

- Took "Basics of Business Data Analytics," "Basics of Information and Knowledge Management," "Intercultural Communication Skills," "Introduction to Pattern Recognition and Machine Learning," "Psychology in Human-Technology Interaction" courses
- Participated in many programs for exchange students, such as the welcome fair and student union trips, to meet people from various cultures

### International Students Mentoring Program

Mar. 2019 - July 2019

- Mentored a foreign student about school life, including the use of on-campus facilities
- Planned extra activities about life in Seoul, including how to use cultural facilities, open a bank account, etc.

## Skills

<b>Programming</b>	Python, R, C, Java, MySQL, Android, Swift
<b>Deep Learning</b>	Pytorch, Keras, Tensorflow
<b>Data Analysis</b>	Numpy, Pandas, scikit-learn, Matplotlib, Tableau
<b>Languages</b>	Korean (native), English (fluent), Chinese (intermediate)