Doyeon **Kim**

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Education

Seoul National University — *Seoul, South Korea*

M.S., Artificial Intelligence — *Mar. 2022 - Feb. 2024*

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

Kwangwoon University — *Seoul, South Korea*

B.S., Information Convergence, Data Science focus — *Mar. 2018 - Feb. 2022*

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

Publication

International

2024 **PLOS ONE**, Accurate multi-behavior sequence-aware recommendation via graph convolution networks — *SCIE*
***Doyeon Kim**, Saurav Tanwar, and U Kang*

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

Domestic

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

Patent

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

Research Experience

Freelance Project Matching System — *Apr. 2023 - Dec. 2023*

- Created a system that matched freelancers with suitable projects using project announcements and freelance resumes
- Processed text using RoBERTa and learned relationships between freelancers and projects using graph neural networks

Calendar-based Schedule Recommender System — *Dec. 2022 - Apr. 2023*

- Data collection and structural design for schedule recommendation system using content-based filtering
- 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 "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 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	**3rd Place**, Monthly Dacon Emotion Recognition AI Competition	*DACON*
2021	**Dean's List**, for Academic Excellence	*Kwangwoon University*
2020	**1st Place**, K-STARTUP 2020 STUDENT LEAGUE Mock Crowdfunding Competition	*Korea Enterprise Foundation*
2020	**1st Place**, 4th KHU Valley Program(KVP)	*Kyunghee University*
2020	**Dean's List**, for Academic Excellence	*Kwangwoon University*
2020	**Special Prize**, 2020 Open Source Contribution Conference	*Ministry of Science and ICT*

Honors

2022	**AI Fellowship**, excellence in artificial intelligence	*Seoul National University*
2021	**Semester High Honors**, high achievements throughout the semester	*Kwangwoon University*
2021	**Software Excellence Scholarships**, excellence in software design	*Kwangwoon University*
2019	**English Excellence Scholarships**, excellence in English	*Kwangwoon University*
2018	**Admission Scholarships**, excellent admission qualifications	*Kwangwoon University*

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

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