Kyoungjun Park

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EDUCATION

Korea Advanced Institute of Science and Technology (KAIST) *School of Computing / M.S. degree (Outstanding Thesis Award, 3.95 / 4.3)* *Advisor: Myungchul Kim*	*03.2017 –* *02.2019*
Chung-Ang University *Computer Science Engineering / B.S. degree (Summa Cum Laude, 4.36 / 4.5)* *Advisor: Sungrae Cho*	*03.2013 –* *02.2017*

RESEARCH INTERESTS

Mobile and Ubiquitous Computing, Multimedia, Machine Learning, Reinforcement Learning, and Human-computer Interaction.

EMPLOYMENT

TmaxSoft Co., Ltd. *For an alternative military service* *Research Engineer & Team Leader (06.2021 –)*	*02.2019 –*

AWARDS & HONORS

Best Research Award at Tmax Group *1st place among the first-year research engineers at the Tmax group*	*01.2020*
Outstanding Thesis Award at KAIST's School of Computing *For a Master's thesis titled "Environment-Aware Video Streaming Optimization of Power Consumption"*	*02.2019*
The DLive Scholarship *$3K support for the presentation of the international conference (IEEE INFOCOM)*	*01.2019*
Qualcomm-KAIST Innovation Awards *$5K research grant awarded by Qualcomm to challenging and creative science and engineering students*	*09.2018*
Chung-Ang University Scholarship *Merit-based scholarships for seven semesters*	*09.2013 –* *02.2017*

PUBLICATIONS

(Under Review) NeuSaver: Neural Adaptive Power Consumption Optimization for Mobile Video Streaming
Kyoungjun Park, Myungchul Kim, Laihyuk Park.
IEEE Transactions on Mobile Computing (TMC) 2021.

EVSO: Environment-aware Video Streaming Optimization of Power Consumption.
Kyoungjun Park, Myungchul Kim.
IEEE International Conference on Computer Communications (INFOCOM) 2019. *(acceptance ratio = 19.7%, 288/1464)*

Energy-Efficient Mobile Charging for Wireless Power Transfer in Internet of Things Networks.
Woongsoo Na, Junho Park, Cheol Lee, **Kyoungjun Park**, Joongheon Kim, Sungrae Cho.
IEEE Internet of Things Journal 2018.

PATENTS

Method to analyze data (Application filed in the USA & KR)
Kyoungjun Park, Youngkwang Lee, Saemaro Moon, Changho Hwang

Method and apparatus of video streaming (Korean title: 비디오 스트리밍 방법 및 장치)
Myungchul Kim, **Kyoungjun Park**.
South Korea, 10-2153801

09.2020 –

ACTIVITIES

Young Engineers Honor Society (YEHS) Regular Member
- An organization under the National Academy of Engineering of Korea (NAEK)
- Volunteered as a high school seminar presenter and a mentor in the middle school engineering classroom.

11.2015 –

2016 Qualcomm IT Tour
- Hosted by Qualcomm.
- Presented to CEO Derek at the San Diego headquarters on how to advance the technology.

06.27.2016 – 07.02.2016

Ubiquitous Computing Lab, Chung-Ang University
- Participated as an undergraduate researcher.
- Conducted research on efficient clustering techniques for mobile chargers with wireless charging.

01.2015 – 06.2016

TEACHING EXPERIENCES

[CS360] Instruction to Database at KAIST
Teaching Assistant

Spring 2018

[CS408] Computer Science Project at KAIST
Teaching Assistant

Fall 2017

RECENT PROJECTS

Recommendation & Guide for Exploratory Data Analysis (EDA) in Jupyter Notebook
- Recommended to the user for the next analysis action and the proper parameterization of analysis actions (e.g., group-by, filter, chart type, pivot).
- Developed a crawling module using GitHub's API to collect and a filtering process that only selects meaningful EDA notebooks scattered on the data center.
- Developed a customized python debugger/interpreter that can access the function call to understand the contents of python codes and processed it into training data.
  → Tracked a total of 60 functions in libraries such as pandas, matplotlib, etc.
- Utilized various models such as RNN and regression to learn user's analysis know-how and insight.

2021.01 –

Analysis Recommendation According to User's Preference
- Recommended charts/graphs that users are likely to see based on past user preferences.
- Applied the deep learning model based on YouTube's recommendation model.
- Utilized various models including ARIMA and isolation-forest to analyze data features.

02.2019 – 2021.01

Video Streaming Optimization using Reinforcement Learning
- Video analysis through various observations such as network traffic, and similarity between video frames when streaming videos
- Used the A3C technique for the training algorithm, which is the latest actor-critic method including two neural networks.

07.2018 – 01.2021

Maritime Connectivity Platform
- A communication framework enabling efficient electronic information exchange between all authorized maritime stakeholders across available communication systems
- Developed Maritime Messaging Service that allows maritime stakeholders to communicate seamlessly.

03.2017 – 12.2018