Kyoungjun Park

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EDUCATION

Korea Advanced Institute of Science and Technology (KAIST) — *03.2017 – 02.2019*
School of Computing / M.S. degree (Outstanding Thesis Award, 3.95 / 4.3)
Advisor: Myungchul Kim

Chung-Ang University — *03.2013 – 02.2017*
Computer Science Engineering / B.S. degree (Summa Cum Laude, 4.36 / 4.5)
Advisor: Sungrae Cho

RESEARCH INTERESTS

Mobile and ubiquitous systems, Multimedia, Mobile Computing, Human-computer interaction, and Reinforcement learning.

EMPLOYMENT

TmaxSoft Co., Ltd. — *02.2019 –*
Research Engineer, Alternative Military Service

AWARDS & HONORS

Best Research Award at Tmax Group — *01.2020*
1st place among the first-year research engineers at the Tmax company

Outstanding Thesis Award at KAIST's School of Computing — *02.2019*
For a Master's thesis titled "Environment-Aware Video Streaming Optimization of Power Consumption"

The DLive Scholarship — *01.2019*
$3K support for the presentation of the international conference (IEEE INFOCOM)

Qualcomm-KAIST Innovation Awards — *09.2018*
$5K award

Chung-Ang University Scholarship — *03.2013 – 02.2017*
Merit-based scholarships for 7 semesters

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 and apparatus of video streaming (비디오 스트리밍 방법 및 장치) — *09.2020 –*
Myungchul Kim, **Kyoungjun Park**.
South Korea, 10-2153801

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

ACTIVITIES

Young Engineers Honor Society (YEHS) Regular Member — *11.2015 –*
- Established under the National Academy of Engineering of Korea (NAEK).
- Volunteered as a high school major seminar presenter and a mentor in the middle school engineering classroom.

2016 Qualcomm IT Tour — *06.27.2016 – 07.02.2016*
- Hosted by Qualcomm.
- Presented to CEO Derek at the San Diego headquarters on how to advance the technology.

Ubiquitous Computing Lab, Chung-Ang University — *01.2015 – 06.2016*
- Worked as an undergraduate researcher.
- Participated in research on efficient clustering techniques for mobile chargers with wireless charging.

RECENT PROJECTS

Recommendation & Guide for Exploratory Data Analysis (EDA) in Jupyter Notebook — *2021.01 –*
- 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.

Analysis Recommendation with User's Preference — *02.2019 – 2021.01*
- Recommended charts/graphs that users are likely to see based on user preference and data features.
- Applied the deep learning model that is similar to YouTube's recommendation model.
- Utilized various models including ARIMA and isolation-forest to analyze data features.

Video Streaming Optimization with Reinforcement Learning — *07.2018 – 01.2021*
- Video analysis through various observations such as network traffic, and similarity between video frames when streaming videos
- The training algorithm used the A3C technique, which is the latest actor-critic method including two neural networks.

Maritime Connectivity Platform — *03.2017 – 12.2018*
- 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 and reliably.