# 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 (w/ the Outstanding Thesis Award)*
*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, Human-computer interaction, and Machine learning & Reinforcement learning.

## EMPLOYMENT

**TmaxSoft Co., Ltd.** — *02.2019 –*
*Research Engineer*

## 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 presentation of 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).
- Presenter of high school major seminar and mentor of the junior engineering classroom

**2016 Qualcomm IT Tour** — *06.27.2016 – 07.02.2016*
- Hosted by Qualcomm.
- Listened to the sessions at the San Diego headquarters and presented to CEO Derek in a free theme.

**Ubiquitous Computing Lab, Chung-Ang University** — *01.2015 – 06.2016*
- Research on clustering technique for Mobile Charger (MC) with wireless charging

## RECENT PROJECTS

**Recommendations & Guides for Jupyter's Exploratory Data Analysis (EDA) Notebook** — *2021.01 –*
- Recommended to the user for the next analysis action and the appropriate parameterization of each analysis action (e.g., group-by, filter, chart type, pivot).
- Developed a crawling module using GitHub's API to collect and filter useful EDA notebooks scattered on GitHub.
- Developed a customized python debugger/interpreter that can access the level of function call to understand the contents of a python code and processed it into training data (Watching 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.

**Recommendations & Guides for User's Exploratory Data Analysis (EDA)** — *02.2019 – 2021.01*
- Recommended charts/graphs that users want to see based on user preference and data feature.
- Applied the deep Learning model that YouTube used for video recommendation for user preference.
- 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 A3C technique, which is the latest actor-critic method including two Neural Networks, and we used Policy Gradient Method to train the policy.

**Maritime Connectivity Platform (MCP)** — *03.2017 – 12.2019*
- A communication framework enabling efficient electronic information exchange between all authorized maritime stakeholders across available communication systems
- Developed Maritime Messaging Service (MMS) that allows maritime stakeholders to communicate seamlessly and reliably