Heejae Park

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EDUCATION

Seoul National University of Science and Technology (SEOULTECH) *03.2022 –*
Computer Science and Engineering / M.S. degree
Advisor: Laihyuk Park

Seoul National University of Science and Technology (SEOULTECH) *03.2018 – 02.2022*
Computer Science and Engineering / B.S. degree (Summa Cum Laude, 4.28 / 4.5)
Advisor: Laihyuk Park

RESEARCH INTERESTS

Next-generation Network (5G, 6G), Intelligent Reflecting Surface (IRS), Multicast, Machine Learning, and Deep Learning.

AWARDS & HONORS

Seoul National University of Science and Technology Scholarship *09.2018 – 02.2022*
Merit-based scholarships for seven semesters

PUBLICATIONS

The Application of Machine Learning and Artificial Intelligence for Beyond 5G and 6G.
Heejae Park, Seongryool Wee, Laihyuk Park.
KICS Winter Conference 2021.

Challenges in Terahertz Technology for Extended Reality Application.
Seongryool Wee, **Heejae Park**, Laihyuk Park.
KICS Winter Conference 2021.

Trends and Examples of Private 5G.
Heejae Park, Laihyuk Park.
Information and Communications Magazine 2021.

Energy Hub Based Prosumer Electricity Scheduling Algorithm.
Heejae Park, Seongryool Wee, Laihyuk Park.
The Journal of Korean Institute of Communications and Information Science 2021.

Learning-based Frequency Synchronization with NTP for Low-cost Phasor Measurement Units.
Heejae Park, Seongryool Wee, Laihyuk Park.
International Conference on Information Networking 2021.

ACTIVITIES

Intelligent Communication, Computing and Energy Lab, Seoul National University of Science and Technology *12.2019 –*

- Participated as an undergraduate researcher.

TEACHING EXPERIENCES

Introduction to Programming (1) at SEOULTECH *Spring 2022*
Teaching Assistant

Probability and Random Variables at SEOULTECH *Spring 2022*

Teaching Assistant

RECENT PROJECTS

Network congestion prediction using NS-3(Network Simulator) *01.2021 – 06.2022*

- Predict network congestion in simulation environment.
- Collected data and related features from NS-3 point to point simulation.
- Used multiple ML models (SGD, SVC, TREE) with different parameters.

Smart Closet System for the Visually Impaired *11.2021 – 12.2021*

- Tell you about color and type of clothes, when you film clothes on the camera.
- Used Pytorch framework (CNN), and transfer learning algorithm.
- Tacotron2 model was used for TTS (Text to Speech).

Recommendation for scouting soccer player *09.2021 – 10.2021*

- Recommend soccer player based on the clustering results.
- Used KMeans clustering algorithm, and the performance metrics are inertia, and silhouette score.
- Used PCA, and TSNE to visualize the results.

Stock Recommendation using Natural Language Processing *05.2021 – 06.2021*

- Recommend to the user based on the fact that if the number of positive tweets is more than three times the number of negative tweets, program recommends buying it.
- Used TextBlob library to get sentimental score, and results are shown in Word Cloud.