Hyunho Lee

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RESEARCH INTERESTS

Deep learning for geospatial data such as remote sensed images and DEM (digital elevation model)

Spatiotemporal data mining and applications for water resources management

Spatial data science and geographic information science

EDUCATION

Arizona State University — *Aug. 2022 – Present*
Doctor of Philosophy, Major in Geographic Information Science — *Tempe, United States*
Advisor: Prof. Wenwen Li

KAIST (Korea Advanced Institute of Science and Technology) — *Mar. 2008 – Feb. 2010*
Master of Science, Major in Computer Science — *Daejeon, Republic of Korea*
Thesis: The layer-based vector texture for 3D rendering
Advisor: Prof. Kwangyun, Wohn

Ajou University — *Mar. 2001 – Aug. 2007*
Bachelor of Engineering, Major in Information and Computer Engineering — *Suwon, Republic of Korea*
Honors: *Magna Cum Laude* — *(intensive major course)*

PUBLICATIONS

[1] J Park, **H Lee** (2020) "Prediction of high turbidity in rivers using LSTM algorithm". *Journal of Korean Society of Water and Wastewater* 34 (1), 35-43, https://doi.org/10.11001/jksww.2020.34.1.035

[2] J Kim, M Park, Y Yoon, **H Lee** (2020) "Application of recurrent neural network for inflow prediction into multi-purpose dam basin". *Advances in Hydroinformatics*, 397-408, https://doi.org/10.1007/978-981-15-5436-0_31

[3] J Park, **H Lee**, CY Park, S Hasan, TY Heo, WH Lee (2019) "Algal morphological identification in watersheds for drinking water supply using neural architecture search for convolutional neural network". *Water* 11 (7), 1338, https://doi.org/10.3390/w11071338

[4] **H Lee**, K Wohn (2010) "The layer-based vector texture for 3D rendering". *Proceeding of 2010 Conference on the HCI Society of Korea*, 40-43

WORK EXPERIENCE

Korea Water Resources Corporation (K-water), Daejeon, Korea — ***Jul. 2010 – Present***

- **Senior Manager**, Digital Water Platform Dept., Water Platform Dev. Team — *Jan. 2021 – Jun.2022*
- **Manager**, Digital Innovation Dept., Big Data Business Team — *Jan. 2020 – Dec. 2020*
- **Manager**, Data Center Dept., Big Data Business Team — *Jan. 2019 – Dec. 2019*
- **Manager**, Water Data Collection and Analysis Dept., Water Data Integ. Team — *Jan. 2018 – Dec. 2018*
- **Manager**, Human Resources Management Dept., HR Management Team — *Jan. 2013 – Dec. 2017*
- **Staff**, Information System Management Dept., Information Planning Team — *Jul. 2010 – Dec. 2012*

HONORS AND AWARDS

1st Place Prize, *5th Bigdata analysis competition in K-water* — *Oct. 2021*

Academic Conference Paper Award, *Korean Society of Environmental Engineering Annual Conference* — *Nov. 2020*

Bronze Award, *ACM-ICPC (International Collegiate Programming Contest) Asia-Seoul Regional* — *Nov. 2003*

- The team was three members, my role was the team leader and main programmer (C/C++)

SCHOLARSHIPS

Selected as K-water's doctoral program trainee to the United States (full support) — *Aug. 2021*

KAIST Scholarship — *Mar. 2008 – Feb. 2010*

Dean's Scholarship — *Mar. 2007 – Jun. 2007*

University Scholarship — *Mar. 2002 – Jun. 2002*

Daewoo Scholarship — *Sep. 2001 – Dec. 2001*

TEACHING EXPERIENCE

In-house Instructor, Data Analysis with R programming, *K-water* — *Apr.2018 – May.2021*

Teaching Assistant, Introduction to Programming (CS101), *KAIST* — *Mar. 2009 – Jul.2009*

CERTIFICATION

Advanced Data Analytics Professional, certificated by K-Data, Korea *(pass rate: 2.76%)* — *Apr. 2019*

MOOC'S – ONLINE CERTIFICATION

Machine Learning, CSMM.102x, ColumbiaX *(EDX)* — *Jan. 2017 – Apr. 2017*

Mathematical Fundamentals for Data Science, Korea University *(K-MOOC)* — *Oct. 2017 – Jan. 2018*

Artificial Intelligence and Machine Learning, KAIST *(K-MOOC)* — *Jan. 2018 – Feb. 2018*

PROFESSIONAL SKILLS

Programming Languages	Python, R, C/C++, JAVA, ABAP (SAP)
Data Science and Machine Learning	Keras, Tensorflow, Sci-kit Learn
Visualization	Matplotlib, Plotly, Leaflet, QGIS, OpenGL