Hyunho Lee

Korea Water Resources Corporation, 200, Sintanjin-ro Daedeok-gu Daejeon, Korea
Email) hyunho.lee26@gmail.com, hyunho@kwater.or.kr

RESEARCH INTERESTS

Spatiotemporal Forecasting, Uncertainty Estimation

Spatial AI, Machine learning and Deep learning for Geospatial data

Physics Guided Deep Learning

EDUCATION

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 Development 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 Integration 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 consisted of 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, certified 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