

# Hyunho Lee

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## RESEARCH INTERESTS

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Spatiotemporal Forecasting, Uncertainty Estimation  
Spatial AI, Machine learning and Deep learning for Geospatial data  
Physics Guided Deep Learning

## EDUCATION

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### KAIST (Korea Advanced Institute of Science and Technology)

Master of Science, Major in Computer Science

Thesis: The layer-based vector texture for 3D rendering

Advisor: Prof. Kwangyun, Wohn.

Mar. 2008 – Feb. 2010

Daejeon, Republic of Korea

### Ajou University

Bachelor of Engineering, Major in Information and Computer Engineering

Honors: *Magna Cum Laude*

Mar. 2001 – Aug. 2007

Suwon, Republic of Korea

*intensive major course*

## PUBLICATIONS

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- [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](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

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### 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

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<b>1st Place Prize</b> , 5th Bigdata analysis competition in K-water	Oct. 2021
<b>Academic Conference Paper Award</b> , Korean Society of Environmental Engineering Annual Conference	Nov. 2020
<b>Bronze Award</b> , 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

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<b>Selected as K-water's doctoral program trainee to the United States (full support)</b>	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

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<b>In-house Instructor</b> , Data Analysis with R programming, K-water	Apr. 2018 – May. 2021
<b>Teaching Assistant</b> , Introduction to Programming (CS101), KAIST	Mar. 2009 – Jul. 2009

## CERTIFICATION

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Advanced Data Analytics Professional, certificated by K-Data, Korea (pass rate: 2.76%)	Apr. 2019
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## MOOC'S – ONLINE CERTIFICATION

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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

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