Hyunho Lee

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Current Employment

Ph.D. Student, *Arizona State University* **2022 – Present**

Education

Ph.D. Geographic Information Science **2026** (expected)
Arizona State University *Tempe, United States*
Advisor: Dr. Wenwen Li

M.S. Computer Science **2010**
Korea Advanced Institute of Science and Technology (KAIST) *Daejeon, Republic of Korea*
Thesis: The layer-based vector texture for 3D rendering
Advisor: Dr. Kwangyun Wohn

B.E. Information and Computer Engineering **2007**
Ajou University *Suwon, Republic of Korea*

Research Interests

- Deep learning models using satellite imagery for the water resources management
- Spatiotemporal data mining for the water resources management
- GeoAI and Spatial data science

Peer-Reviewed Publications

[1] **Lee, H.**, & Li, W. (2024). Improving interpretability of deep active learning for flood inundation mapping through class ambiguity indices using multi-spectral satellite imagery. *Remote Sensing of Environment*, 309, 114213.

[2] Li, W., Hsu, C. Y., Wang, S., Yang, Y., **Lee, H.**, Liljedahl, A., ... & Solis, P. (2024). Segment Anything Model Can Not Segment Anything: Assessing AI Foundation Model's Generalizability in Permafrost Mapping. *Remote Sensing*, 16(5), 797.

[3] Park, J., & **Lee, H.** (2020). Prediction of high turbidity in rivers using LSTM algorithm. *Journal of Korean Society of Water and Wastewater*, 34(1), 35-43.

[4] Park, J., **Lee, H.**, Park, C. Y., Hasan, S., Heo, T. Y., & Lee, W. H. (2019). Algal morphological identification in watersheds for drinking water supply using neural architecture search for convolutional neural network. *Water*, 11(7), 1338.

[5] Park, M. K., Yoon, Y. S., **Lee, H. H**, & Kim, J. H. (2018). Application of recurrent neural network for inflow prediction into multi-purpose dam basin. *Journal of Korea Water Resources Association*, 51(12), 1217-1227.

Conference Proceedings

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

Conference Proceedings (Workshop)

[1] Li, W., **Lee, H.**, Wang, S., Hsu, C. Y., & Arundel, S. T. (2023, November). Assessment of a new GeoAI foundation model for flood inundation mapping. *In Proceedings of the 6th ACM SIGSPATIAL International Workshop on AI for Geographic Knowledge Discovery* (pp. 102-109).

Conference Presentations

[1] **Lee, H.**, & Li, W. Spatially Masked Adaptive Gated Network for Enhanced SAR-based Flood Mapping with Incomplete Multispectral Data. Finalist, RSSG Student Honor Paper Competition at AAG Annual Meeting, 2025.

[2] **Lee, H.**, & Li, W. Advancing Interpretability of Deep Active Learning in Flood Mapping with Multispectral Imagery. Poster presentation at AGU Fall Meeting, 2024.

[3] **Lee, H.**, & Li, W. Improving Interpretability of Deep Active Learning for Flood Inundation Mapping Through Class Ambiguity Indices Using Multispectral Satellite Imagery. Oral presentation at AAG Annual Meeting, 2024.

Honors and Awards

3rd Place, Student Honors Paper Competition 2025
AAG Remote Sensing Specialty Group

Anthony J. Brazel Research Award 2024
School of Geographical Sciences and Urban Planning at Arizona State University

Pat Gober Water Prize (a student research proposal competition) 2023
School of Geographical Sciences and Urban Planning at Arizona State University

1st Place 2021
5th Bigdata analysis competition, *K-water*

Bronze award (12th Place), International Collegiate Programming Contest 2003
Asia-Seoul Regional, *ACM (Association for Computing Machinery)*

Certification

Advanced Data Analytics Professional (ADP), *certificated by K-Data* 2019
- Data Analysis Certificate in South Korea (Pass rate: 2.76%)

Artificial Intelligence and Machine Learning, KAIST, *certificated by K-MOOC* 2018

Mathematical Fundamentals for Data Science, Korea University, *certificated by K-MOOC* 2018

Machine Learning, ColumbiaX, *certificated by EDX* 2017

SKILLS

Programming Languages	Python, R, C/C++, JAVA, ABAP (SAP)
Deep Learning	PyTorch, mmsegmentation, Keras, Tensorflow
Remote Sensing	Google Earth Engine, QGIS