DAVID KIM

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EDUCATION

University of Florida Gainesville, Florida, United States
Jan. 2021-Dec. 2024

- College of Design, Construction, and Planning (DCP) - Urban and Regional Planning
- Ph.D. in Urban and Regional Planning
  - Dissertation: Impacts of Climate Change on The Housing Market – A Case Study of Miami-Dade County, Florida
- GPA 3.95 / 4.0
- *Certificate of Outstanding Merit*
- ***Graduate School Funding Award (GSFA): Fully funded Ph.D. (4 years)***

Seoul National University Seoul, Republic of Korea
Mar. 2009-Feb. 2011

- Graduate School of Environmental Studies (GSES)
- Master of City Planning
  - Thesis: A Study on Characteristics of Regions That Affect Residence Decisions of Art-Creating Groups
- GPA 4.1 / 4.3

Handong Global University pohang, Republic of Korea
Mar. 2002-Feb. 2009

- Bachelor of Science in Urban and Environmental Engineering
- Bachelor of Science in Construction Engineering
- GPA 4.1 / 4.5
- ***Graduated with First Class Honors***

WORK&RESEARCH EXPERIENCE

Korea Research Institute for Human Settlements Sejong, Republic of Korea
Associate Research Fellow June 2019-Present
Assistant Research Fellow Mar. 2012-June 2019

■ Research Projects

**Only most recent and topical listed*

- Development of Urban Planning Technologies Using Artificial Intelligence Based on Big Data (ongoing)

- Big data and AI-based urban planning simulation and empirical studies for supporting future urban master plan process
- Granted $390,150 by the Korea Agency for Infrastructure Technology Advancement
- *Role: Vice-Principal Investigator (overall coordination of research, and development of urban planning strategies based on big data and AI for national urban areas, including simulation and empirical validation)*

- National Territory and Urban Big Data Center for Innovative and Inclusive Growth (2020)
  - Developing a center on national and urban big data for data collecting, refining, fusion, and for improving models, big data networks and data infrastructure
  - Granted $336,000 by the National Information Society Agency
  - *Role: Vice-Principal Investigator*
- Development of Spatial Simulation Model for Smart City Mangement (2020)
  - Simulating urban sprawl for smart management
  - Granted $92,400 by National Information Society Agency
  - *Role: Collect, refine, and analyze sprawl-related data into cells with GIS and R*; m*onitor PyTorch based simulation*
- The Development and Application of a Balanced National Development Analysis Model based on Big Data (2020)
  - Developing a socio-economic big data-based micro-dynamic methodology for analyzing balanced national development
  - Granted $32,600 by KRIHS
  - *Role: Refine, density analyze, and visualize income and spatial data with R and GIS*
- Developing a Youth-friendly Industrial Zone Strategy (2018) (Granted $32,000 by KRIHS)
  - *Role: Collect, refine, and fuse insurance data analysis with R*
- Big Data Based Urban Polarization and Gentrification Analysis Modeling (2018)
  - Analyze and visualize Seoul's spatial income distribution
  - Granted $12,479 by the Seoul Metropolitan Government
  - *Role: Collect and refine income data and visualize it with R and GIS*
- Sejong City Growth Management Plan (2018)
  - Simulate Sejong City's Sprawl and Establish a Management Plan
  - Granted $378,000 by Sejong City
  - *Role: Run SELUTH* model with GIS, Cygwin
- Ulsan/Gyeongbuk Linked Cooperation Regional Planning Research (2018)
  - Regional planning for a Ulsan-Pohang-Gyeongju city network
  - Granted $427,000 by the Ministry of Land, Infrastructure, and Transport
  - *Role: Population movement analysis based on cellphone user data*

- 5th National Territorial Planning (2020-2040) (II) (2020)
  - Long term national spatial planning
  - Granted $336,000 by the Ministry of Land, Infrastructure and Transport
  - *Role: Managing team members; network analysis based on transportation data with NetMiner; mapping with GIS*
- Monitoring and Simulation of Urban Polarization by Using Financial and Spatial Big Data (2017)
  - Spatial polarization analysis of Busan with big data
  - Granted $98,000 by the National Information Society Agency
  - *Role: Big data analysis of income with R and GIS mapping*
- Monitoring Methods for Land Use Cover Change using Deep Learning Algorithms (2018)
  - Granted $59,000 by KRIHS
  - Preceding research survey on land use mapping methods

Millennium Promise, Inc. & Merry-Year International Malawi
Project Consultant, Intern July 2011-June 2012

- Creating GIS village maps with local youth by educating them on the use of GPS

PUBLICATIONS AND PRESENTATION

■ **Simulation, Visualisation, Deep Learning, and Big Data Related**
**Only recent or major publications and presentations*

Journal Papers

David Kim, and Emre Tepe. 2025. Estimating the impacts of climate change risk perception on local housing market: A case study in Miami-Dade, Florida, *Cities. 169, 106517.*
https://doi.org/10.1016/j.cities.2025.106517

David Kim, and Emre Tepe. 2025. A Closer Look at Housing Market Actors' Dynamics in Responses to Sea Level Rise in Miami-Dade, Florida, *Journal of Environmental Management. 373, 123640.*
https://doi.org/10.1016/j.jenvman.2024.123640

Donghan Kim, and **David Kim**. 2018. Development and application of dynamic visualization model for spatial big data, *Journal of the Korean Association of Geographic Information Studies. 21(1), 57–70.*
http://dx.doi.org/10.11108/kagis.2018.21.1.057

Research & Policy Papers

David Kim, and Donghan Kim. 2025.
National Strategy for AI Transformation in the Public Sector of Land and Urban Planning and Development of AI-Based Public Service Models.

2026 National Research Agenda Report II. National Research Council for Economics, Humanities and Social Sciences (NRC), Sejong-si, South Korea. (in Korean)

David Kim, Donghan Kim, and Hyejung Sung. 2026. AI-Driven Transformation in National and Urban Planning: Global Trends and Policy Implications. *KRIHS Issue Report.* Korea Research Institute for Human Settlements, Sejong-si, Korea. (in Korean)

David Kim. 2025. Climate Gentrification: Warnings from Across the Sea and Our Response, *Working Paper* (in Korean), Korea Research Institute for Human Settlements, Sejong-si, Korea

Invited Roundtable Presentation

David Kim. 2025. 5th Roundtable on Smart Cities and Inclusive Growth. *OECD.* Paris, France
https://www.oecd.org/en/events/2025/10/5th-oecd-roundtable-on-smart-cities-and-inclusive-growth.html

International Conference Presentation

David Kim. 2025. Application of AI to Spatial Delineation in the Comprehensive Plan: the Case of Busan. Korea. *ACSP Urban Planning AI Workshop, Association of Collegiate School of Planning (ACSP) 2025 Annual Conference.* Minneapolis, United States

International Conference Posters

David Kim. 2025. Machine Learning-based House Price Prediction for Near-Future Sea Level Rise Scenarios. *19th International Conference on Computers in Urban Planning and Urban Management (CUPUM).* London, United Kingdom

David Kim. 2017. Dynamic Visualization of Mobile Big Data for Planning Support: A Case Study on Jeju Island. *15th International Conference on Computers in Urban Planning and Urban Management (CUPUM).* Adelaide, Australia

Conference Proceedings

David Kim, Donghan Kim. 2025. AI and Big Data Approaches to Spatial Boundaries in Urban Planning: The Case of Busan, in *Proceedings of the 2025 Fall Conference of The Korean Association of Geographic Information Studies.*

David Kim. 2025. Big Data, Spatial Statistics, and Machine Learning-Based Study on the Past, Present, and Near Future Impacts of Sea Level Rise on Local Coastal Housing Markets, in *Proceedings of the 2025 Spring Conference of The Korean Association of Geographic Information Studies.*

Kihwan Seos, Changwha Oh, David Kim, Min-Yeong Lee, and Yoon-Jung Yang. 2019. An empirical study on automatic building extraction from aerial images using a deep learning algorithm, in *Proceedings of the 2019 Spring Conference of The Korean Society for Geospatial Information Science.* **Best Paper Award, Presenter: David Kim**

Kihwan Seo, Changwha Oh, David Kim, Min-Yeong Lee, and Yoon-Jung Yang. 2018. A Study on Land-use/Land-cover Monitoring Using Aerial Ortho-Photo and Deep Learning Algorithm, in *Proceedings of the 2018 Fall Conference of The Korean Society for Geospatial Information Science*

Donghan Kim, and David Kim. 2017. Urban polarization analysis and visualization using financial and spatial big data, in *Proceedings of the 2017 Fall Conference of the Korea Intelligent Information Systems Society*

David Kim, and Mack-Joong Choi. An Empirical Study on the City's Creative Environment's Impact on Attracting Creative Class (2010), *Korea Planners Association*

TEACHING

Texas A&M University Texas, U.S.A, 2015

- Delivered online lecture about Korean National Spatial Planning

Daegu Dukhwa Middle School Daegu, Korea, 2015

- Delivered lecture at National Territory Education Program for Teachers

ACADEMIC SERVICES

Journal Reviewer

Reviewer (ad hoc), Journal of Planning Education and Research
Reviewer (ad hoc), Journal of Korean Urban Planning Association

Policy / Professional Review

Manuscript Reviewer, *월간국토*

HONORS AND AWARDS

Paul Zwick Graduate Student Award, Department of Urban and Regional Planning, University of Florida, 2025 (awarded for advanced analytical approaches to urban planning problems)

Certificates of Outstanding Merit, University of Florida, 2022

Graduate School Funding Award (GSFA), College of Design, Construction, and Planning, University of Florida, 2021 - 2024

- Planed to continue for 4 years, renewed annually

Best Paper Award, Korea Spatial Information Society (KSIS), 2019

- Participated as third author and presented research

Outstanding Research Award, Korea Research Institute for Human Settlements (KRIHS), 2018, 2019

- Participated in four awarded projects as research team member

KRIHS Presidential Commendation, Korea Research Institute for Human Settlements (KRIHS), 2015

Superior Academic Performance Scholarship, Seoul National University, 2009 second semester, 2010 first and second semesters

Graduate Student Outstanding Paper Award (second author), Citibank & Korea Institute of Finance, 2009

Graduate Student Best Paper Award (second author), Korean Association for Housing Policy Studies, 2009

Pohang Mayor's Prize**,** Pohang City, 2009

Awards of Excellence (Graduated with First Class Honors), Handong Global University, 2009

National Science & Technology Scholarship, Korea Science and Engineering Foundation (KSEF), 2007

Superior Academic Performance Scholarship, Handong Global University, 2003 and 2004 first semester, 2008 first and second semester

QUALIFICATIONS AND SKILLS

Computer

Spatial Analysis Tools : ArcGIS, ArcGISPro, QGIS, S-Cube
Languages : Python, R, SQL, Java, HTML
Machine learning: PyTorch, TensorFlow
Network Analysis : Gephi, NetMiner, UCINET
Visualization : Mapbox.js, Processing
Other software: SPSS, JMP