

# 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 (98.75%)
- *Certificate of Outstanding Merit*
- ***Graduate School Funding Award (GSFA)***

### 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 (97%)

### 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 (95%)
- ***Graduated with First Class Honors***

## WORK&RESEARCH EXPERIENCE

### Korea Research Institute for Human Settlements

*Associate Research Fellow*  
*Assistant Research Fellow*

Sejong, Republic of Korea  
June 2019-Present  
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; monitor 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. 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>

#### **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**. 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

## HONORS AND AWARDS

***Paul Zwick Graduate Student Award***, Department of Urban and Regional Planning, University of Florida, 2025

***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*