Goeun Jung

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EDUCATION

Korea University
Seoul, Korea
Aug. 2022
- M.S. in Geography / Spatial Analysis
- Advisor: Prof. Young-ho Kim

Kongju National University
Seoul, Korea
Feb. 2020
- Bachelor of Geography
- Advisor: Prof. Man-gyu Kim

RESEARCH INTERESTS

Human mobility, Air Pollution, Spatial Modeling, Spatio-temporal change, Land use and Land cover change

PUBLICATIONS

- Goeun Jung, Youngho Kim. (2022). A Spatio-temporal Pattern Analysis of Seoul Bus Use After COVID-19 Outbreaks Using Big Data-based Network Cluster Analysis — April, 2022
  - Journal of the Korean Cartographic Association Volume 22, Number 1
  - DOI: https://doi.org/10.16879/jkca.2022.22.1.035
- Goeun Jung, Youngho Kim. (2021). Modeling of Spatio-temporal changes of Urban Sprawl in Jeju-island: Using CA (Cellular Automata) and ARD (Automatic Rule Detection) — April, 2021
  - JAKG (Journal of the Association of Korean Geographers) Volume 10, Number 1
  - DOI: https://doi.org/10.25202/JAKG.10.1.9

WORK EXPERIENCE

National Cancer Center, Department of Cancer AI & Digital Health, Researcher
Goyang, Korea
Sep 2022 – Present
- Personal PM Exposure
  - Investigating the Relationship between Personal PM Exposure and Time-Activity Diares and GPS Data
  - Analyzing Spatial Variability of Personal PM Exposure in Microenvironments
- Air Pollution Predictive Modeling
  - Predictive Modeling of Outdoor Air Pollution (PM10, PM2.5, O3, NO2) Using Ordinary Kriging
  - Calculating Approximately 320 Geographic Variables, including Land Cover, Census, Transportation, and Environmental Factors, as Predictors

National Cancer Center, Graduate Researcher
Korea
Aug 2020 – Jan 2021
Apr 2022 – Aug 2022
- Geospatial Data Pipeline Construction
  - Expanding the Spatiotemporal Coverage of Data Used in Air Pollution Modeling
  - Automating Data Collection and Processing for DEM, NDVI, Census, and Additional Data for Air Pollution Modeling

Korea Environment Institute (KEI), Climate and Air Quality Research Group, Research Intern
Sejong, Korea
July 2018 –Oct 2018
- Analysis of Regional Variations in NO2 Emission by Source for Particulate Matter Reduction and Creation Map
- Literature Review on NO2 Research
- Spatial Data Management Using R
- Processing of CrIS Satellite Images

RESEARCH EXPERIENCE

- **Research Assistant: Land Cover Change Prediction Modeling (Korea Research Foundation)**
  - Analysis of Land Cover Change by Administrative Region using LUCK2018 Model   2018 – 2019
  - Literature Review on Land Cover Changes Modeling
  - Construct of a Databased and Thematic Maps for Land Cover Change Modeling
  - Analysis of the Impact of Spatial Data Weighting on Land Cover Change Prediction (Presented at the 2018 Fall Conference of The Korean Association of Geographic Information Studies)

- **Research Assistant (Proposal Writing): Spatiotemporal Analysis of COVID-19 Spread**
  - Verification of Social Distancing Impact Using Population Mobility and Media Data   2021
  - Crawling and Text mining of Articles and Comments Using R for COVID-19 Media Trends
  - Analysis of Regional Traffic Volume Changes Before and After COVID-19

- **Research Assistant at ChungNam Institute: Network Analysis Using Road Networks**   2019
  - Conducted Network Analysis to Study Vehicle Travel Times to Cultural Facilities Utilizing Precision Road Networks
  - Prepared Network Analysis Reports and Created Visualizations

- **Project: Detection of Land Cover Change Using Multi-Temporal Satellite Images**   2019
  - Creation of Land Cover Maps Using Landsat Satellite Images
  - Detection of Land Cover Change and Societal Analysis

- **Research Assistant: Population Growth Rates due to Innovative City Development**   2018
  - Creation of a Stepwise Population Growth Rate Map for Adjacent Areas

AWARDS

2024 ICA Scholarship - Regional Cartographic Conference Scholarship − *CAGIS + UCGIS SYMPOSIUM in Columbus, Ohio*	2024
Outstanding Paper Award, KAGIS (The Korean Association of Geographic Information Studies) Fall − *Academic Conference*	2023
ESRI (Environmental Systems Research Institute) **Map Contest - Excellence Award** (MAPtelligence) − *Presentation on the Spatiotemporal Patterns of Bus Mobility Before and After COVID-19*	2022
Outstanding Paper Award, Korea University	2022

Academic Conference

▪ KAGIS (The Korean Association of Geographic Information Studies), *Presentation on "The effect of weighting by spatial data on prediction of land-use change using relative favorability function model"*	2017
▪ AG (The Association of Korean Geographers), *Presentation on "Jeju Island Sprawl Prediction Using Cellular Automata"*	2020
▪ KCA (The Korean Cartographic Association), *Presentation on "Changes in spatial and temporal patterns of bus use in Seoul due to the COVID-19 outbreak"*	2021
▪ KSEH (Korean Society of Environmental Health), *Presentation on "Correlation of Air Pollution and Traffic Volume: Comparison between Road Density and Traffic Volume Estimates"*	2022
▪ ISEE (International Society for Environmental Epidemiology), *Presentation on "Construction of a geospatial data pipeline for epidemiology: a case study of land use and road network in South Korea"*	2023

SELECTED COURSEWORK

GIS and RS

Remote Sensing Geographic Information Systems (Undergraduate)

Understanding and Utilizing Satellite Image Information (Undergraduate)

Remote Sensing (Undergraduate)

Geographic Information Systems (Undergraduate)

Geographic Information Systems (Undergraduate)

Application of Geographic Information Systems (MS)

Applied GIS (MS)

Environment and Climate

Understanding Particulate Matter (Undergraduate)

Weather Observation and Forecasting (Undergraduate)

Climate Change Science (Undergraduate)

Statistics

Health Mathematics (MS)

Environmental Analysis Statistics (Undergraduate)