

Jiwon Jang

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RESEARCH INTEREST

Agent Based Modeling, cyberGIS, cyberInfrastructure, GeoAI, Human Dynamics, Human mobility, Segregation, Spatiotemporal Data Analysis, Social Media, Social Sensing, Social Stratification, Spatial Statistics

EDUCATION

Master of Engineering, Major in Social Network Science (GPA: 4.23/4.3) Aug. 2018 – Aug. 2020

Kyung Hee University, Seoul, Korea

Dissertation: Predicting human behavior patterns using user-generated content : Deep reinforcement learning approach (Advisor: Dr.Jin-mu Choi)

Bachelor of Sociology, Major in Sociology (GPA: 3.72/4.5) Mar. 2016 – Aug. 2018

Kyung Hee University, Seoul, Korea

Thesis: A Study on the University Students' News Usage Patterns using Social Network Analysis

Bachelor of Arts, Major in English Language and Literature (GPA: 3.62/4.5) Mar. 2012 – Feb. 2016

Yeungnam University, Gyeongsan-si, Gyeongsangbuk-do, Korea

- Transfer to Kyung Hee University

ACADEMIC PUBLICATIONS

Jang, J., Kim, M., Choi, J., (2020), "A Study on the Relationship between Foot Traffic and Instagram Contents Using Spatial Panel Model", *Korea Society for Geospatial Information Science* (Accepted, KCI) [[Korean with English abstract](#)]

Jang, J., (2020). "Predicting human behavior patterns using user-generated content : Deep reinforcement learning approach", ME dissertation, Kyung Hee University, Seoul. <https://url.kr/AamGLj>

(In progress) **Jang, J.**, Choi, J. (2020) [Predicting human mobility using Instagram user generated contents : Deep reinforcement learning approach](#)

RESEARCH EXPERIENCE

Research Assistant, Spatial Analysis Lab, Kyung Hee University

Development of Disaster Information System

Apr. 2019 – Aug. 2020

National Disaster Management Research Institute, Korea

- Developed algorithm to solve optimized evacuation paths and routing problems during disaster situations using spatial network analysis and deep reinforcement learning algorithm
- Used the python network analysis package (Networkx) and deep learning frameworks (Tensorflow, Keras)

A Study on the Correlation between Urban Land Cover and PM2.5 Distribution

Jul. 2019 – Aug. 2020

National Research Foundation of Korea

- Analyzed the correlation between Urban land cover and PM2.5 using spatial statistics (Spatial Regression, GWR, Dynamic Linear model)
- Used statistical software (SPSS, STATA, Geoda) and statistical language R

A Study on the Countermeasure of International Standardization of Address

May 2019 – Dec. 2019

Ministry of the Interior and Safety, Korea

- Proposed Korean address system to the International Organization for Standardization (ISO) so that the system can be reflected in international standard documents ; Collected and managed data

Research Assistant, AI & BM Lab, Kyung Hee University

Verification of Data Business Model for Artificial Intelligence Home Appliances

Oct. 2018 – Jul. 2019

LG Display Corporate, Korea

- Designed a new business model using data from LG home appliances and developed deep learning-based recommendation systems to improve customer experience
- Developed recommendation system using the python deep learning frameworks (Tensorflow, Keras)

AI-based Youth Innovator Training Course

Aug. 2018 – Feb. 2019

Institute of Information & Communications Technology Planning & Evaluation, Korea

- Planned the education curriculum for human resources development in artificial intelligence fields and participated as a mentor for students in statistics and reinforcement learning education

Research Assistant, Korean General Social Survey (KGSS)

Survey Research Center, Sungkyunkwan University

Jul. 2016 – Sep. 2016

- KGSS is the Korean version of the general social survey developed by the University of Chicago ; Conducted on-site surveys to build panel data

CONFERENCE PRESENTATIONS

Oral Presentation

Jang, J., Lee, H., Choi, J., (2020), Predicting Foot traffic in Itaewon commercial district using reinforcement learning, *Korea Spatial Information Society*, Online, South Korea

Jang, J., Ham, J., Lee, Y., Hwang, S., Choi, J., (2019), Analysis of Concentration Characteristics on the Feeling of Fine Dust, *2019 Annual Meeting of Korean Geographer*, Seoul, South Korea

Poster Presentation

Jang, J., Choi, J., (2019), A Study on the Relationship between Foot Traffic and Instagram Contents Using Spatial Panel Model, *Conference on the Korean Association of Geographic Information Studies*, Jeju, South Korea

WORK EXPERIENCE

TEACHING ASSISTANT

Lecturer, Python Programming Course

Feb. 2020 – Feb. 2020

The student council of graduate schools, Kyung Hee University

- Taught introductory Python programming lectures and techniques for collecting online data using multiple web crawlers

Hankook Research, Internship, Korea.

Jul. 2017 – Aug. 2017

- Designed surveys for public opinion polls and analyzed survey results using SPSS and STATA

Founder

Jul. 2016 – Dec. 2016

Sharing Kitchen, Social venture project , funded by Seoul Community Service Center

- Secured funding for the social venture project to relieve loneliness among the elderly in poverty and managed project budget
- Designed a local community platform for the youth and the elderly to relieve the loneliness of the elderly living alone

Military Experience, Republic of Korea Army

53rd Division, 2nd Battalion

Jul. 2016 – Dec. 2016

Honorable Discharge, as Sergeant, 1^s Squad, 1st Platoon, 5rd Company

- Squad Leader / Company TOD (Thermal Observation Device) operator ; selected as the best trainee in the training camp

LEADERSHIP AND SERVICE

Program Director, Student board of graduate schools

Feb. 2019 – Aug. 2020

Graduate School of Kyung Hee University

- Planned scholarship programs for graduate students to promote participation in overseas academic conferences
- Designed projects to support graduate students' research such as statistics and programming lectures

Graduate Student Representative, Council of Kyung Hee University

Jun. 2019 – Feb. 2020

Kyung Hee University

- Represented graduate students' opinions regarding the university president election as a graduate student representative
- Collected graduate students' opinions to improve research environment and represented graduate students' opinions to the university representatives

Program Director, Student Council of Central Library, Kyung Hee University

Sep. 2017 – Aug. 2018

Kyung Hee University

- Designed the program to improve library environment for students' convenience

AWARDS AND SCHOLARSHIP

Awards

The winner of excellent paper, 2nd GoHwang Scholar Poster Conference, Korea

Sep. 2020

The winner of excellent paper, Korea Spatial Information Society, Korea

Jun. 2020

- Title: Predicting Foot traffic in Itaewon commercial district using reinforcement learning

University President's Recommendation for the excellent research project, Kyung Hee University, Korea

Spring. 2018

- Title: A Study on the University Students' News Usage Patterns using Social Network Analysis

Scholarship

Exemplary Scholarship, Kyung Hee University, Korea	2019-20(2 rd -4 th semesters)
• Graduate school representative scholarship (3 semesters); full tuition	
Research Assistant Scholarship, Kyung Hee University, Korea	Fall 2018
Transformative age 21 Scholarship, Kyung Hee University, Korea	Spring 2018
• Research scholarship for independent research	
Bright Society Scholarship, Kyung Hee University, Korea	2017-18(3 rd -4 rd semesters)
• Student council of central library scholarship	
Mosaic Scholarship, Kyung Hee University, Korea	2017-18(3 rd -4 rd semesters)
International Training Program, Kyung Hee University, Korea	Fall 2016
National Scholarship, Korea Student Aid Foundation, Korea	Fall 2015
Merit-based Scholarship, Yeungnam University, Korea	Fall 2013
Handicapped Student Helper Scholarship, Yeungnam University, Korea	Spring 2013

TECHNICAL SKILLS

Programming languages : python, SQL(mysql, nosql), HTML

GIS : QGIS, Geoda

Statistics : SPSS, STATA, R

Agent-Based Model : Anylogic, Netlogo

Other : Linux(ubuntu server), AWS, Mac OS, Windows, Gephi,

REFERENCES

Prof. Jinmu Choi, PhD.

- Affiliation : Department of Geography, Kyung Hee University, Seoul, Korea
- Email : cjm89@khu.ac.kr
- Tel : +82-2-961-0188

Prof. Yoonjae Nam, PhD.

- Affiliation : Department of Social Network Science, Kyung Hee University, Seoul, Korea
- Email : ynam@khu.ac.kr
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Prof. SoonHyung Yook, PhD.

- Affiliation : Department of Physics, Kyung Hee University, Seoul, Korea
- Email : syook@khu.ac.kr
- Tel : +82-2-961-0253