

# Jiwon Jang

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[jangjiwon@khu.ac.kr](mailto:jangjiwon@khu.ac.kr), (github url)

## EDUCATION

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### **Master of Engineering, Major in Social Network Science**

Aug. 2018 – Aug. 2020

Kyung Hee University, Seoul, Korea

*Dissertation Thesis:* ‘Predicting pedestrian behavior patterns using user generated contents : Deep reinforcement learning approach (Advisor: Prof. Jin-mu Choi)

### **Bachelor of Sociology, Major in Sociology**

Mar. 2016 – Aug. 2018

Kyung Hee University, Seoul, South Korea

Yeungnam University, South Korea

Mar.2012-Feb.2016

- Transfer to Kyung Hee University from Yeungnam University, major in English and English Literature, Mar.2012-Feb.2016

## RESEARCH INTEREST

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GeoAI, spatiotemporal data analysis, human mobility, social media, Social sensing, agent based modeling

## RESEARCH EXPERIENCE

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### **Research Assistant, Spatial Analysis Lab, Kyung Hee University**

*Development of Disaster Information System*

Apr. 2019 – Aug. 2020

*National Disaster Management Research Institute, South Korea*

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

*A Study on the Correlation between Urban Form and PM2.5 Distribution*

Jul. 2019 – Aug. 2020

*National Research Foundation of Korea*

- Analyzed the correlation between Urban Form and PM10 using dynamic linear model
- Utilized statistical software(SPSS, STATA) and statistical language R

*A Study on the Countermeasure of International Standardization of Address*

May 2019 – Dec. 2019

*Ministry of the Interior and Safety, South Korea*

- Proposed to the international Organization for Standardization (ISO) so that Korean address 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, South Korea*

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

*AI-based Youth Innovator Training Course* Aug. 2018 – Feb. 2019  
*Institute of Information & Communications Technology Planning & Evaluation, South Korea*

- Planned the education curriculum for human resources development in artificial intelligence fields

**Research Assistant, Survey Research Center, Sungkyunkwan University**  
*Korean General Social Survey* Jul. 2016 – Aug. 2016

- Organized survey data and conducted on-site surveys to build panel data

## WORKING EXPERIENCE

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### TEACHING ASSISTANT

*Lecturer, Python Programming Course* Feb. 2020 – Feb. 2020  
*Student council of graduate schools, Kyung Hee University*

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

### Employment in Company

*Hankook Research, Internship* Jul. 2017 – Aug. 2017

- Planned and implemented surveys for public opinion polls

### Sharing Kitchen, Social Enterprise , funded by Seoul city, Seoul, Republic of Korea

*Founder* Jul. 2016 – Dec. 2016

- Planned and carried out a joint meal program for the youth and the elderly to relieve the loneliness of the elderly living alone

### Military Experience

*53<sup>rd</sup> Division, 2<sup>nd</sup> Battalion* Jul. 2016 – Dec. 2016  
*Honorable Discharge, as Sergeant, 1<sup>st</sup> Squad, 1<sup>st</sup> Platoon, 5<sup>rd</sup> Company*

- Squad Leader / Company TOD (Thermal Observation Device) operator

## LEADERSHIP AND SERVICE

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*Program Director, Student board of graduate schools* Feb. 2019 – Aug. 2020

### *Graduate School of Kyung Hee University*

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

### *Graduate Student Representative, Council of Kyung Hee University*

Jun. 2019 – Feb. 2020

### *Kyung Hee University*

- Represented graduate students' opinions regarding to the university president election as a graduate student representative
- Collected and presented opinions for improving the research environment of graduate students through surveys

## **AWARDS AND SCHOLARSHIP**

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### **Awards**

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

Jun. 2020

- Title : Predicting Foot traffic in Itaewon commercial district using reinforcement learning, Korea Spatial Information Society

### **Scholarship**

Leadership Scholarships(*Student council of graduate schools*), *Kyung Hee University* , 2019-20(2<sup>rd</sup>-4<sup>th</sup> semesters), \$5,740

Administrative Assistant Scholarship, *Kyung Hee University*, Fall 2018, \$4,370

Transformation 21 Scholarship, *Kyung Hee University*, Spring 2018, \$3,930

- University President's Recommendation for the excellent research project

Leadership Scholarships(*Student council of central library*), *Kyung Hee University* , 2017-18(3<sup>rd</sup>-4<sup>rd</sup> semesters), \$1,240

International Training Program, *Kyung Hee University*, Fall 2016, \$1,660

Mosaic Scholarships, *Kyung Hee University*, 2017-18(3<sup>rd</sup>-4<sup>rd</sup> semesters), \$175

National Scholarship, Korea Student Aid Foundation, Fall 2015, \$366

Merit-based Scholarship, Yeungnam University, Fall 2013, \$770

Handicapped Student Helper Scholarship, Yeungnam University, Spring 2013, \$436

Korea Culture Program, Yeungnam University, Spring 2013, \$130

## **ACADEMIC PUBLICATIONS**

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**Jang, J.** (1<sup>st</sup> author), 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 (in Korean with English abstract, KCI)

## **ACADEMIC PAPERS**

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(In progress) **Jang, J.**(1<sup>st</sup> author), Choi, J. (2020) Predicting human mobility using Instagram user generated contents : Deep reinforcement learning approach, Applied geography (Advisor: Prof. Jin-mu Choi)

## CONFERENCE PRESENTATIONS

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### Oral Presentation

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

**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, 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, Korea

## LANGUAGES

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Korean: Mother Language

English: Proficient

## TECHNICAL SKILLS

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

GIS : QGIS, Geoda

Statistics : SPSS, STATA, R

Agent-Based Model : Anylogic, Netlogo

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

## REFERENCES

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### **Prof. Jinmu Choi, PhD.**

- Affiliation : Department of Geography, Kyung Hee University, Seoul, Korea
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- Tel : +82-2-961-0188

### **Prof. Yoonjae Nam, PhD.**

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### **Prof. SoonHyung Yook, PhD.**

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