

Jiwon Jang

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RESEARCH INTEREST

GeoAI, Spatiotemporal Data Analysis, Human Mobility, Social Media, Social Sensing, Agent Based Modeling

EDUCATION

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: Dr. Jin-mu Choi)

Bachelor of Sociology, Major in Sociology Mar. 2016 – Aug. 2018

Kyung Hee University, Seoul, South Korea

Yeungnam University, Gyeongsan-si, Gyeongsangbuk-do, South Korea Mar.2012-Feb.2016

- Transfer to Kyung Hee University from Yeungnam University(major in English and English Literature)

RESEARCH EXPERIENCE

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 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, 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
- 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, South Korea

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

Research Assistant, Survey Research Center, Sungkyunkwan University

Korean General Social Survey(KGSS)

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

WORKING 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 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

- Secured the funding for the project to restore loneliness among the elderly in poverty
- 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, Republic of Korea Army

53rd Division, 2nd Battalion

Jul. 2016 – Dec. 2016

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

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

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
- Organized 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 for improving the research environment through the survey and represented graduate students' ideas to the university representatives

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, Korea Spatial Information Society

Scholarship

Leadership Scholarships(*Student council of graduate schools*), *Kyung Hee University* , 2019-20(2rd-4th 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(3rd-4rd semesters), \$1,240

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

Mosaic Scholarships, *Kyung Hee University, 2017-18(3rd-4rd 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

Jang, J., Kim, M., Choi, J., (2020), A Study on the Relationship between Foot Traffic and Instagram Contents Using Spatial

ACADEMIC PAPERS

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

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

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), Mac OS, Windows, Gephi, AWS,

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
- Tel : +82-2-961-9187

Prof. SoonHyung Yook, PhD.

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