WOOYONG JUNG

Ph.D. Candidate
College of Information Sciences and Technology, The Pennsylvania State University
Email: wjung@psu.edu | Phone: (929) 810-7769

EDUCATION

Doctor of Philosophy in Informatics, The Pennsylvania State University   Anticipated Dec 2025
- Dissertation title: "Computational Social Science: Applications to Real-World Housing Issues and Human Behavior Studies Through Data-Driven Approaches"
- Advisor: Dr. Dongwon Lee, Professor of Information Sciences and Technology

Master of Arts in Applied Quantitative Research, New York University   Aug 2020

Master of Development Policy, KDI School of Public Policy and Management   Dec 2016

Bachelor of Arts in Development Studies, University of California, Berkeley   Aug 2011

EXPERIENCE

Data Science-relevant

Graduate Research Assistant at PIKE Research Group, The Pennsylvania State University   Aug 2022 – Present
- Conducted research on eviction trends using machine learning and geospatial analysis
- Led analysis of homelessness trends using computer vision techniques to identify homeless tents from crowd-sourced street-view images
- Completed a social media study analyzing user behavior and multiple self-presentations

Data Science Intern, The Washington Post   May 2022 – Aug 2022
- Conducted a look-alike modeling project to predict potential audiences most likely to click on specific advertisements

Graduate Research Assistant, New York University   Dec 2019 – Feb 2020
- Participated in a project led by Prof. Amanda Geller (https://doi.org/10.1007/s10940-020-09471-9)
- Analyzed the use of force (UOF) data in the 11 U.S. police departments to detect racial disparities during community policing
- Visualized the research results

Others

Graduate Teaching Assistant, The Pennsylvania State University   Aug 2021 – May 2022
- IST 210: Organization of Data (Spring 2022)
- DS 200: Introduction to Data Science (Fall 2021)

Senior Research Associate, Korea Development Institute (KDI)   Oct 2014 – Jul 2019
- Analyzed country data (economic and social indicators) and published annual country reports.
- Developed the Knowledge Sharing Program (KSP) Index quantifying project performance capability of partner countries
- Provided strategies encouraging the localization of Sustainable Development Goals (SDGs) in Korea's local governments by surveying the recognition and practices of SDGs in 15 local governments and interviewing relevant officers

Graduate Research Assistant, KDI School of Public Policy and Management   Mar 2014 – Sep 2014
- RA for Prof. Jisun Baek
- Conducted literature reviews and collected relevant data on the policies for promoting small and medium enterprises (SMEs) in Korea and compared them with those of Hungary

Program Manager (Volunteer), COPION Ethiopia   Mar 2012 – Apr 2013
- Monitored and evaluated a child education program and a sexual and reproductive health program (FGAE) in the Oromia region
- Conducted interviews with beneficiaries and assessed changes in their attitude towards reproductive health after our project
- Coordinated short-term volunteer activities in Ethiopia for college students from Korea

PUBLICATIONS

1. **Wooyong Jung**, Maryam Tabar, and Dongwon Lee. "Hotspots of Eviction: Guiding Dual-Track Policy Intervention with Spatial Analysis." *IEEE International Conference on Big Data 2024 (Special Session on Understanding New Markets by Data Science, Social Science, and Economics).*

2. **Wooyong Jung**, Nishant Asati, Lucy Phuong Doan, Thai Le, Aiping Xiong, and Dongwon Lee. "The Strange Case of Jekyll and Hyde: Analysis of r/ToastMe and r/RoastMe Users on Reddit." In *Proceedings of the 18th International AAAI Conference on Web and Social Media (ICWSM) 2024.*

3. Maryam Tabar, **Wooyong Jung**, Amulya Yadav, Owen Wilson Chavez, Ashley Flores and Dongwon Lee. "WARNER: Weakly-Supervised Neural Network to Identify Eviction Filing Hotspots in the Absence of Court Records." In *Proceedings of the 31st ACM International Conference on Information and Knowledge Management (CIKM) 2022.*

4. Maryam Tabar, **Wooyong Jung**, Amulya Yadav, Owen Wilson Chavez, Ashley Flores and Dongwon Lee. "Forecasting the Number of Tenants At-Risk of Formal Eviction: A Machine Learning Approach to Inform Public Policy." In *Proceedings of the 31st International Joint Conference on Artificial Intelligence (IJCAI) 2022.*

5. Wonkyu Shin, **Wooyong Jung**, and Jisun Yi. 2019. "Governance Matters More than Development Constraints for Growth in Sub-Saharan African Countries." *International Development Cooperation Review* 11(2): 55-71.

6. **Wooyong Jung** and Yoon C. Cho. 2019. "Who Remains Conservative?" *Korea Observer* 50(1): 135-161.

7. Song Chang Hong, **Wooyong Jung**, and Gang I Kim. 2019. "Chapter 7. Human Capital." *KDI Research Paper, Sharing Knowledge Sharing the Future*: 264-330.

In Progress

1. **Wooyong Jung**, Dongwook Kim, Sola Kim, Maryam Tabar, and Dongwon Lee. "Mapping and Forecasting Homelessness Tents: Insights from Street-Level Images and 311 Service Requests."

CONFERENCES AND WORKSHOPS

Presenter, IEEE International Conference on Big Data 2024, Washington, DC, USA	Dec 2024
Presenter, The 18th International AAAI Conference on Web and Social Media (ICWSM) 2024, Buffalo, NY, USA	Jun 2024
Participant, Summer Institutes in Computational Social Science (SICSS) Korea, KAIST	Jul 2023

AWARDS AND SCHOLARSHIP

IST Travel Award, Penn State University	Apr 2024
Fund for Excellence in Graduate Recruitment (FEGR) Scholarship, Penn State University	Aug 2021
Scholarship for Academic Excellence (Dean's list with distinction), KDI School of Public Policy and Management	Jan 2014
Entrance Scholarship, KDI School of Public Policy and Management	Sep 2013

SKILLS

Technical Skills	Data Modeling, Data Mining, Machine Learning, Spatiotemporal Analysis, Bayesian Inference
Tools	Python, R, Stan, SQL, Stata
Packages	**[Python]** PyTorch, GPyTorch, Tensorflow, SciPy, Scikit-learn, Pandas, GeoPandas, NumPy **[R]** Tidyverse (dplyr, ggplot2, tidyr, stringr, tibble)