HYORIM YUN

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RESEARCH INTERESTS:

- TECHNOLOGICAL INNOVATION
- SPATIAL DATA SCIENCE
- QUALITY OF LIFE
- WELLBEING
- COMPUTATIONAL SOCIAL SCIENCE

EDUCATION:

M.A. in Geography, Seoul National University ....**2025 GPA:** 4.15/ 4.3

Thesis: *Location Optimization of Battery Swapping Stations for Electric Two-wheelers: Incorporating Safety Distance Constraints*

B.B.A. in Hospitality Management, Kyunghee University ....**2023 GPA:** 4.03/4.5

PUBLICATIONS:

Published

- **Yun, H**., Ha, E., & Lee, G. (2025). "A Study on Knowledge Polycentricity Using Social Network Analysis: Focusing on Co-authored Academic Journal Articles" *Journal of The Korean Association of Regional Geographers*, 31(2).

- Li, X., **Yun, H.**, Li, Q., & Kim, J. (2022). "A multi-channel CNN based online review helpfulness prediction model." *Journal of Intelligence and Information Systems*, 28(2), 171-189.

Ready for Publishing

- **Yun, H**. "Rethinking Food Accessibility: Integrating Online and Offline Grocery Shopping Opportunities in Seoul, South Korea" Accepted(26.02.09) and getting ready for publishing on *The Professional Geographer*.

  preprinted version on SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5049226

CONFERENCE PRESENTATIONS

- **Location Optimization of Electric Two-Wheeler Battery Swapping Stations for Sustainable Net-Zero Transportation Infrastructure Development** (Presented at The 2025 Korean Geography Conference)
- **Location Optimization of Battery Swapping Stations for Electric Two-wheelers** (Presented at The 2025 Spring Korean Cartography Conference)
- **Knowledge Polycentricity in South Korea** (Presented at The 2024 Korean Geography Conference)
- **Tourists as Sensors: How are They Responding to Global Climate Change? (**Presented at The 2024 AAG Annual Meeting Contemporary Tourism 2: Tourist Mobility and Behaviour)
- **The Spatial Digital Divide in Seoul's Food Accessibility** (Presented at the 2023 Winter Conference of Korean Urban Geographers)

SKILLS

- Programming: Python, Gurobi, SQL, R, Hadoop, LaTex
- GIS Tools: QGIS, ArcGIS Pro, ArcMap 10.0
- Design Tools: Figma, Adobe Photoshop, Adobe Illustrator
- Statistical Operation: SPSS
- Microsoft Office packages: Microsoft Word, Excel, PowerPoint

RESEARCH EXPERIENCE

Undergraduate Researcher, *Kyunghee University Smart Tourism Education Platform,*......................**2022-2023**

Advisor: Sangwon Park

Conducted research on human mobility using spatial data within a tourism studies framework.

- Analyzed inter-tourist site networks by applying graph theory to GPS-tracking data of rental cars in Jeju Island.
- Extracted staypoints from tracking data and modeling tourist sites as nodes and flows as weighted edges.
- Developed predictive models using Graph Neural Networks (GNN) to estimate mobility between tourist destinations.

Undergraduate Researcher, *Kyunghee University Big Data Graduate School*.....................................**2021-2022**

Advisor: Jaegyeong Kim

- Participated in research supported by the BK21 KHU-Fellowship Scholarship Program.
- Improved online review helpfulness prediction models through qualitative information processing such as semantic analysis, text mining, and deep learning.
- Gained hands-on experience in developing and evaluating deep learning models, identifying limitations in existing approaches, and proposing technical improvements.
- Co-authored a paper published in the Journal of Intelligent Information Systems based on research outcomes.

TEACHING EXPERIENCE

Teaching Assistant, Seoul National University ,...**2024**

- Served as a teaching assistant for the class *'Spatial Information and Geo-visualization'* at Seoul National University, Department of Geography
- Rearranged course for hands-on training of open-source GIS tools (e.g. QGIS, Python, Google Web Plugins)
- Mentored Undergraduate student projects

WORK EXPERIENCE

Research Associate (Full Time), Goyang City Institute Department of Economics, Goyang, South Korea ..**2025.09 ~**

- Researcher at GCI which is the public policy research institute for Goyang City

Data Annotation & QA Assistant (Part Time), *AllBigDat*, Seongnam, South Korea **2025.07-2025.08**

- Performed document-image annotation on academic papers for computer-vision training, contributing to AI dataset construction; extensive labeling in engineering, air quality/electrification related to climate response, and MIS

HONORS AND AWARDS:

National Scholarship (Seoul National University) **2023-2025**

Scholarship for Academic Excellence (Seoul National University) **2024**

Best Paper Presentation Award at The Korean Urban Geographical Society Winter Conference **2023**

Research Scholarship (Kyunghee University) **2023**

KHU Fellowship Scholarship (Kyunghee University) **2023**

2nd Prize at the 2023 Busan Data-Driven Tourism Idea Contest (Busan Tourism Organization) **2023**

Excellence Award at the 2022 Korea Tourism Data Lab Contest (Korea Tourism Organization)...................**2022**

Excellence Award at the Student Idea Contest (Korea Hotel & Resort Association)......................................**2023**

Finalist at the 43rd Cheil Idea Festival (Cheil Worldwide)...**2023**

FUNDED PROJECTS:

[BK21 FOUR] KHU Fellowship for Research Group Development

*Kyung Hee University Big Data Graduate School (*PI: Jaegyeong Kim),..**2021.12-2022.02**

BK21 FOUR KHU-Fellowship–funded project (₩10,000,000; ≈ USD $7K) with a three-member team (UG/MS/PhD). Built and evaluated deep-learning models for online-review helpfulness, resulting in a co-authored paper in the Journal of Intelligent Information Systems.

Implementation and Dissemination for the Sustainable Development of Smart Tourism Cities

*Kyung Hee University Industry-University-Research Cooperation Foundation (*PI: Namho Chung),,....**2023.01-2023.01**

Developed a smart tourism application for the Mekong River–basin countries, integrating multi-country tourism POI datasets and planning the UI/UX via user research; funded at approx. ₩2,000,000 (≈ USD $1.44K).

- **Artificial Intelligence in Urban Planning** (Fall, 2024) *Seoul National University, Graduate School of Environmental Studies*, Dr. Jige Quan, Graduate Course

- **Seminars in Geographic Information Sceince: Spatial Data Mining Techniques and Applications** (Spring, 2024), Seoul National University, Department of Geography, Dr. Gunhak Lee, Graduate Course

- **Seminars in Global Climate Change and Environmental Change: Global Warming** (Spring, 2024), Seoul National University, Department of Geography, Dr. Jungjae Park, Graduate Course

- **Spatial Optimization Seminar** (Fall, 2023), Seoul National University, Department of Geography, Dr. Gunhak Lee, Graduate Course

- **Seminar in Geographies of Transportation, Information and Communication Technology: The Geography of Networks** (Fall, 2023) Seoul National University, Department of Geography, Dr. Jungyul Sohn, Graduate Course

- **Quantitative Geography: Multivariate Statistical Methods** (Fall, 2023), Seoul National University, Department of Geography, Dr. Kiho Park, Graduate Course

- **GIS and Spatial Analysis**, Kyunghee University (Spring, 2023), Department of Geography, Dr. Jinmu Choi, Undergraduate Course

- **Management Information Systems**, Kyunghee University (Fall, 2022), College of Hotel Management andTourism, Dr. Minseop Jeong, Undergraduate Course

- **Business Statistics**, Kyunghee University (Fall, 2022), College of Hotel Management and Tourism, Dr. Hongcheol Shin, Undergraduate Course

- **Business Analytics**, Kyunghee University, (Spring, 2022), College of Hotel Management and Tourism, Dr. Kyuwan Choi, Undergraduate Course

- **Data Analysis Using R**, Kyunghee University (Spring, 2022), College of Social Sciences Data Science Convergence Track, Dr. Insik Min, Undergraduate Course

Audited Courses

- **Spatial Analytics 2: Machine Learning**, Seoul National University, Department of Geography, Dr. Insang Song, Undergraduate Course

- **Computer Cartography**, Seoul National University, Department of Geography, Dr. Gunhak Lee, Undergraduate Course

EXTRA CURRICULAR ACTIVITIES

On-campus Activities

- **Business Analytics and Consulting Society, Kyunghee University**

Led business analytics sessions, focusing on data-driven problem solving methodologies and strategic planning for major tech companies in the hospitality and food delivery sectors of South Korea

Rearranged educational curriculum as serving as the Vice President, expanding from statistical analysis using R to include training in Python and open-source GIS software.

- **Culture, Tourism & Contents Society, Kyunghee University**

Off-campus Activities

- **Data Youth Campus,** Korea Data Industry Promotion Agency and the Ministry of Science and Technology,

Acquired proficiency in database management using SQL and Spark

Developed expertise in deep learning algorithms (e.g. CNN, RNN) and fundamental computer vision techniques

Selected as a finalist (Top 5 teams) at Yonsei University's Final Project Presentation

SELECTED CLASS WORK

Routing Optimization for Autonomous Demand Responsive Transportation Services in Gangneung
(term project for the class 'Spatial Optimization Seminar, 2023 Fall', Seoul National University, Graduate School of Environmental Studies *Individual Project)*

- Optimized routes for the Gangneung autonomous taxi service by applying the Vehicle Routing Problem (VRP) algorithm, utilizing T-map search index data and the Gangneung tourist taxi station location data.

Travel Flow based Transportation for Busan Night Tourists
(project aligned with 2023 Busan Data-driven Tourism Idea Contest, *Team Project)*

- As a team leader, I analyzed tourist travel flows and visitation patterns in Busan to identify Areas of Interests (AOIs) by clustering frequently visited destinations, and designed bus routes connecting these spatial clusters serve workation visitors and night tourists

Tourist Demand Forecasting using LSTM & Contents-based Recommendation Systems for Tourist Dispersion
(project aligned with Data Youth Campus held by Korea Data Industry Promotion Agency and the Ministry of Science and Technology, *Team Project)*

- Developed a tourist demand prediction model for Jeju Island's major attractions by comparing LSTM and CNN-LSTM approaches and built a recommendation system to mitigate over tourism issues.