

# Dr. Eng. Sungkyu (Shaun) Park

CONTACT INFORMATION	<p>KDI SCHOOL of Public Policy and Management 263, Namsejong-ro, Sejong, South Korea 30149</p> <p>e-mail: <a href="mailto:shaun@kdischool.ac.kr">shaun@kdischool.ac.kr</a> homepage: <a href="https://www.shawn.kr">https://www.shawn.kr</a></p>
RESEARCH INTERESTS	<p>Understanding human behaviors and psychiatric disorders in real world through the lens of large-scale data (e.g., mobile-sensing user logs, online social network logs, and so on)</p> <ul style="list-style-type: none"> <li>Predicting and interpreting the degree of disorders utilizing deep-learning approaches</li> <li>Discovering users' unique traits driving the disorders</li> <li>Developing customized mobile intervention applications</li> </ul> <p><b>Google Scholar</b> <a href="https://scholar.google.com/citations?user=eXQ8BsMAAAAJ&amp;hl=ko&amp;oi=ao">https://scholar.google.com/citations?user=eXQ8BsMAAAAJ&amp;hl=ko&amp;oi=ao</a></p>
EDUCATION	<p><b>Korea Advanced Institute of Science and Technology (KAIST)</b>, Daejeon, South Korea</p> <p><i>Ph.D. in Graduate School of Culture Technology</i> August 2020</p> <ul style="list-style-type: none"> <li>Thesis Topic: Neural Network-based Learning of Sleep Patterns and Application-driven Interventions</li> <li>Advisor: Dr. Meeyoung Cha &amp; Dr. Wonjoon Kim</li> </ul> <p><b>Korea Advanced Institute of Science and Technology (KAIST)</b>, Daejeon, South Korea</p> <p><i>M.S. in Graduate School of Web Science Technology, School of Computing</i> August 2014</p> <ul style="list-style-type: none"> <li>Thesis Topic: Exploring Depressive Moods through the Lens of Online Social Behaviors</li> <li>Advisor: Dr. Meeyoung Cha</li> </ul> <p><b>Sungkyunkwan University (SKKU)</b>, Suwon, South Korea</p> <p><i>B.S. in Information and Communication Engineering</i> February 2009</p>
SELECTED PUBLICATIONS	<p>A. Baigutanova, <b>S. Park</b>, M. Constantinides, S. W. Lee, D. Quercia, and M. Cha. A continuous real-world dataset comprising wearable-based heart rate variability alongside sleep diaries. <i>Scientific Data</i>, 12, 1474, 2025. doi.org/10.1038/s41597-025-05801-3. <i>Impact Factor</i> = 6.9 [SCIE]</p> <p>D. Kim, <b>S. Park</b>, and J. Park. AI Innovation at the Crossroads: Complementarity Between Public and Private Sectors. In <i>proc. of the 11<sup>th</sup> International Conference on Computational Social Science (IC<sup>2</sup>S<sup>2</sup>)</i>, July 2025. (Extended Abstract, Presented at the Oral Session)</p> <p>S. Han, <b>S. Park</b>, and S. Lee. Tabular Feature Discovery With Reasoning Type Exploration. arXiv:2506.20357. June 2025. [PREPRINT]</p> <p>H. Lee, M. Cho, S. W. Lee, and <b>S. Park</b>. Predicting sleep quality with digital biomarkers and artificial neural networks. <i>Frontiers in Psychiatry</i>, 16, 1591448, 2025. doi.org/10.3389/fpsyt.2025.1591448. <i>Impact Factor</i> = 3.2 [SCIE] [SSCI]</p> <p>M. Koo, D. Kim, S. Han, and <b>S. Park</b>. Platform-Invariant Topic Modeling via Contrastive Learning to Mitigate Platform-Induced Bias. In <i>proc. of The 2024 Conference on Empirical Methods in Natural Language Processing (EMNLP) – Findings</i>, 2024. (Paper presented on Nov 14, 2024)</p> <p>M. P. Lee, K. Hoang, <b>S. Park</b>, Y. M. Song, E. Y. Joo, W. Chang, J. H. Kim, and J. K. Kim. Imputing Missing Sleep Data from Wearables with Neural Networks in Real-world Settings. <i>Sleep</i>, zsad266, 2023. doi:10.1093/sleep/zsad266. <i>Impact Factor</i> = 6.3 [SCIE]</p> <p><b>S. Park</b>, A. Zhunis, M. Constantinides, L. M. Aiello, D. Quercia, and M. Cha. Social Dimensions Impact Individual Sleep Quantity and Quality. <i>Scientific Reports</i>, 13(1):1-11, 2023. doi:10.1038/s41598-023-36762-5. <i>Impact Factor</i> = 4.6 [SCIE]</p>

S. Han, M. Shin, **S. Park**, C. Jung, and M. Cha. Unified Neural Topic Model via Contrastive Learning and Term Weighting. In *proc. of European Association for Computational Linguistics 2023 (EACL)*, 2023. doi:10.18653/v1/2023.eacl-main.132. *Acceptance rate for the main conference = 24.1%*

M. S. Kim, **S. Park**, M. Cha, and S. W. Lee. Effects of Child Maltreatment on Physical Activity and Sleep in Healthy Adults: A Wearable Device Use Experiment. *Journal of the Korean Society of Biological Therapies in Psychiatry*, 28(2):74–82, 2022. (Paper in Korean)

**S. Park**, M. Whiting, M. M. Molaie, H. Chin, S. W. Lee, and M. Cha. Do Differences in National or Political Identity Matter More for Preferences? In *proc. of the 8<sup>th</sup> International Conference on Computational Social Science (IC<sup>2</sup>S<sup>2</sup>)*, July 2022. (Extended Abstract, Presented at the poster session)

**S. Park**, H. Song, S. Han, B. Weldegebriel, L. Manovich, E. Arielli and M. Cha. Using Web Data to Reveal 22-Year History of Sneaker Designs. In *proc. of The Web Conference 2022 (WWW)*, 2022. doi:10.1145/3485447.3512017. *Acceptance rate for full paper = 17.7%*  
[BEST PAPER CANDIDATE (Top 3.4% of the accepted papers)]

**S. Park**, H. Song, S. Han, L. Manovich, E. Arielli, and M. Cha. The Shape of Design History: Exploring Evolution of Sneakers Design at Scale Using Neural Embedding. In *proc. of the 7<sup>th</sup> International Conference on Computational Social Science (IC<sup>2</sup>S<sup>2</sup>)*, 2021. (Extended Abstract)

**S. Park**, S. Han, J. Kim, M. M. Molaie, H. D. Vu, K. Singh, J. Han, W. Lee, and M. Cha. COVID-19 Discourse on Twitter: Case Study of Risk Communication in Four Asian Countries. *Journal of Medical Internet Research (JMIR)*, 03/03/2021:23272, 2021. doi:10.2196/23272. *Impact Factor = 5.03 [SCIE]*

S. Park, S. Han, S. Kim, D. Kim, **S. Park**, S. Hong, and M. Cha. Improving Unsupervised Image Clustering With Robust Learning. In *proc. of the 2021 IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021. *Acceptance rate for full paper  $\approx$  25%*

**S. Park**, S. W. Lee, D. Ahn, and M. Cha. Designing a Mobile Intervention Platform to Help Alleviate Insomnia Symptoms in College Students. *Journal of the Korean Society of Biological Therapies in Psychiatry*, 27(1):50–58, 2021. (Paper in Korean)

**S. Park**, J. Y. Park, H. Chin, J. Kang, and M. Cha. An Experimental Study to Understand User Experience and Perception Bias Occurred by Fact-checking Messages. In *proc. of The Web Conference 2021 (WWW)*, 2021. doi:10.1145/3442381.3450121. *Acceptance rate for full paper = 20.6%*

**S. Park**, J. Y. Park, J. Kang, and M. Cha. The Presence of Unexpected Biases in Online Fact-checking. *Harvard Kennedy School (HKS) Misinformation Review*, 2021. doi:10.37016/mr-2020-53.

M. Shin, S. Han, **S. Park**, and M. Cha. A Risk Communication Event Detection Model via Contrastive Learning. In *the 3rd Workshop on NLP for Internet Freedom (NLP4IF)*, co-located with COLING, accepted for the oral presentation, 2020. (Short paper)

**S. Park**, S. Han, J. Kim, M. M. Molaie, H. D. Vu, K. Singh, J. Han, W. Lee, M. Cha. Risk communication in Asian countries: COVID-19 discourse on Twitter. In *In-depth Stage Sessions and Presentations in the Conference for Truth and Trust Online (TTO)*, 2020. (Short paper)

**S. Park**, M. Constantinides, L. M. Aiello, D. Quercia, and P. v. Gent. WellBeat: A Framework for Tracking Daily Well-being Using Smartwatches. *IEEE Internet Computing*, 2020. doi:10.1109/MIC.2020.3017867. *Impact Factor = 4.231 [SCIE]*

S. Han, S. Park, **S. Park**, S. Kim, and M. Cha. Mitigating Embedding and Class Assignment Mismatch in Unsupervised Image Classification. In *proc. of the 2020 European Conference on Computer Vision (ECCV)*, 2020. *Acceptance rate for full paper = 27.1%*

**S. Park**, S. W. Lee, S. Han, and M. Cha. Clustering Insomnia Patterns by Data from Wearable Devices: Algorithm Development and Validation. *JMIR Mhealth and Uhealth (JMU)*, 2019. doi:10.2196/14473. *Impact Factor = 4.301 [SCIE]*

**S. Park**, C. T. Li, S. Han, H. Cheng, S. W. Lee, and M. Cha. Learning Sleep Quality from Daily Logs, In *proc. of the 25th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)*, 2019. *Acceptance rate for full paper = 14.2%*

**S. Park**, S. W. Lee, and M. Cha. Exploring Insomnia-related Clusters based on Intricate Relationship Among Behavioral, Biological, and Sleeping Data: Focusing on a Smart Band Wearing Experiment, In *proc. of the Korean DataBase Conference (KDBC)*, 2018. (Korean)

**S. Park**, S. W. Lee, and M. Cha. Exploring intricate relationship among behavioral, biological, and sleeping dimensions, In *proc. of the International School and Conference on Network Science (NetSci)*, 2018. (Abstract)

**S. Park**, I. Kim, and M. Cha. Mobile calling patterns are linked to young adults' mental health, In *proc. of the International Workshop on Data and Text Mining in Biomedical Informatics (DTMBIO)*. *CIKM*, 2017. (Short paper)

**S. Park**, J. Park, S. Cho, and J. Won. Approaches to Successful Entry of the Ride-sharing Service for Startups. In *proc. of ACM CHI Conference Extended Abstracts on Human Factors in Computing Systems*, 2017.

S. W. Lee, I. Kim, J. Yoo, **S. Park**, B. Jeong, and M. Cha. Insights from an expressive writing intervention on Facebook to help alleviate depressive symptoms, In *Elsevier Computers in Human Behavior*, 62: 613-619, 2016. *Impact Factor = 2.694 [SSCI]*

I. Kim, S. W. Lee, **S. Park**, J. Yoo, M. Cha, and B. Jeong. Designing an expressive writing platform for young adults in Korea. In *proc. of ACM CHI Workshop on HCI and Health*, 2015.

**S. Park**, I. Kim, S. W. Lee, J. Yoo, B. Jeong, and M. Cha. Manifestation of Depression and Loneliness on Social Networks: A Case Study of Young Adults on Facebook. In *proc. of the ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)*, 2015. *Acceptance rate for full paper = 28%*

**S. Park**, S. W. Lee, J. Kwak, M. Cha, and B. Jeong. Activities on Facebook Reveal the Depressive State of Users. *Journal of Medical Internet Research (JMIR)*, 15(10):e217, 2013. doi:10.2196/jmir.2718. *Impact Factor = 4.7 [SCIE]*

K. Park, J. Park, **S. Park**, J. Kim, S. Kwon, J. Kwak, and M. Cha. Voice of the Employees Resonated in Online Bamboo Forests. In *proc. of the AAAI ICWSM Workshop on Social Computing for Workforce 2.0*, 2013. (Short paper)

## PATENTS

**S. Park**, S. W. Lee, and J. Won. Method and apparatus for providing insomnia intervention service, South Korea, Patent No. 10-2141804 July 31, 2020

J. Park and **S. Park**. Mobile taxi-pooling service companion recommendation method and device using trust networks, South Korea, Patent No. 10-1813779 December 22, 2017

J. Park and **S. Park**. Mobile taxi-pooling service charging method and device, South Korea, Patent No. 10-1813780 December 22, 2017

INVITED TALKS	<b>How to survive in the age of convergence research</b> , Seoul, South Korea	December 15, 2022
	<ul style="list-style-type: none"> <li>• Ada Workshop at the Korea AI Summit 2022</li> </ul>	
	<b>Successfully entering the ride-sharing industry: focusing on infrastructure development and service operation</b> , Uiwang, South Korea	June 13, 2017
	<ul style="list-style-type: none"> <li>• Hyundai Motor Group</li> </ul>	
	<b>Facebook activities reveal the depressive states of users</b> , Daegu, South Korea	December 13, 2013
	<ul style="list-style-type: none"> <li>• Daegu Gyeongbuk International Social Network Conference (DISC) 2013</li> </ul>	
TEACHING EXPERIENCE	<b>KDI School of Public Policy and Management</b> MSZ019 – ML for Social Scientists Part 2	Fall 2025
	<b>KDI School of Public Policy and Management</b> MSZ014 – HCI Seminar	Spring 2025
	<b>KDI School of Public Policy and Management</b> MSZ010 – AI Ethics	2024-2025
	<b>Kangwon National University</b> 4465024 – Machine Learning	Spring 2024
	<b>Kangwon National University</b> 4465011 – Open-source Programming	Fall 2023
	<b>Kangwon National University</b> 4465008 – Artificial Intelligence Ethics	Fall 2023
	<b>Kangwon National University</b> 4465010 – Data Analysis Programming	Spring 2023
	<b>Kangwon National University</b> 4465005 – Artificial Intelligence Convergence Basics	Spring 2023–2024
	<b>Kangwon National University</b> 1130004 – Understanding AI (Team-teaching)	Spring–Fall 2023–2024
	<b>Kangwon Innovation Platform</b> 4730061 – Medical Deep-learning (Team-teaching)	Spring 2023–2024
	<b>Kangwon National University</b> 229010 – Convergence Medical Devices (Team-teaching)	Fall 2022–2023
	<b>Kangwon National University</b> 229100 – Research Ethics & Dissertation Writing	Fall 2022
	<b>Kangwon National University</b> 1410033 – C Programming	Fall 2022
	<b>Kangwon National University</b> 1410037 – Object-oriented Programming	Fall 2022–2023
	<b>Kangwon National University</b> 4471010 – Data Structures	Spring 2022
	<b>Kangwon National University</b> 1410036 – Programming Basics	Spring 2022–2024
	<b>Kangwon National University</b> 1410029 – Introduction to Computers	Spring 2022
	<b>KAIST</b> GCT576 – Social Computing (Teaching Assistant)	Fall 2018
	<b>KAIST</b> CS564 – Introduction to Big Data Analytics Using R (Teaching Assistant)	Spring 2018
	<b>Kangnam University</b> – Youth Career Academy Mentoring: Big Data Expert Course for Senior Undergraduate Students (Instructor & Mentor)	January – February 2016
PROFESSIONAL EXPERIENCE	<b>Assistant Professor</b> at KDI School, Sejong, South Korea	<u>July 2024 – Present</u>
	<ul style="list-style-type: none"> <li>• <i>Master of Data Science for Public Policy and Management (Full-time)</i></li> <li>• Focusing on four research domains: 1) health sciences; 2) public health policy; 3) text/data mining; 4) AI theory</li> </ul>	
	<b>Assistant Professor</b> at Kangwon National University, Chuncheon, South Korea	March 2022 – June 2024
	<ul style="list-style-type: none"> <li>• <i>Department of Artificial Intelligence Convergence, College of Information Technology (Full-time)</i></li> </ul>	
	<b>Senior Researcher</b> at Institute for Basic Science (IBS), Daejeon, South Korea	September 2020 – February 2022
	Chief Investigator: Dr. Meeyoung Cha	
	<ul style="list-style-type: none"> <li>• <i>Data Science Group, Center for Mathematical and Computational Sciences (Full-time)</i></li> <li>• Focused on four research domains: 1) mental health; 2) text mining; 3) unsupervised learning; 4) cultural analytics</li> </ul>	
	<b>Research Intern</b> at Nokia Bell Labs, Cambridge, United Kingdom	June – August 2019
	Department Head: Dr. Daniele Quercia	
	<ul style="list-style-type: none"> <li>• <i>Social Dynamics Team (Full-time)</i></li> <li>• Developed a smartwatch application that can retrieve health signals and self-reported mood data</li> </ul>	
	<b>Co-founder &amp; Chief Operating Officer</b> at Kaniza Lab Co., Ltd, Seoul, Korea	March 2015 – January 2017
	<ul style="list-style-type: none"> <li>• <i>Business Operation and Data Analysis Team (Full-time)</i></li> <li>• Launched and managed two mobile-based on-demand platforms on public transportation domains</li> </ul>	
	<b>Research Engineer</b> at Samsung Electronics, Suwon, South Korea	January 2009 – April 2012
	Director: Mr. David Yoonwoo Lee	
	<ul style="list-style-type: none"> <li>• <i>Standards Certification Lab. in Business Planning Group at Visual Display Business (Full-time)</i></li> <li>• Dealt with standardization of technical formats on TV and home entertainment products</li> </ul>	

AWARDS	<b>Research to Mitigate Platform-induced Topic Modeling Bias,</b> Encouragement Award for Undergraduate Students at the Korea Software Congress (KSC) 2023	February 2024
	<b>A Wearable Device-based End-to-end System for Predicting Physiological Well-being,</b> Outstanding Presentation Paper Award at the Korea Software Congress (KSC) 2022	February 2023
	<b>Contrastive Neural Topic Model Using Term Weighting,</b> Outstanding Paper Award at the Conference of Korean Artificial Intelligence Association (CKAIA) 2022	August 2022
	<b>The Sneakers Universe,</b> A digital artwork accepted for the AI × ART contest exhibit held by the National Science Museum of South Korea	December 2021
TECHNICAL SKILLS	Fluency in quantitative methods: statistics, machine learning, deep learning, social network analysis, and mobile and wearable computing <ul style="list-style-type: none"> <li>• Programming: Python, PyTorch, R, JAVA, JavaScript, C, and MATLAB</li> </ul>	
PROFESSIONAL SERVICES	<b>Conference Session Chairs</b> <ul style="list-style-type: none"> <li>• 11<sup>th</sup> Intl. Conference on Computational Social Science (IC<sup>2</sup>S<sup>2</sup>), Norrköping, Sweden</li> </ul>	July 24, 2025
	<b>Major Journal Paper Reviews</b> <ul style="list-style-type: none"> <li>• npj Complexity, 2024</li> <li>• JMIRx-Med, 2021</li> <li>• Journal of Medical Internet Research (JMIR), 2021</li> <li>• JMIR Research Protocol, 2021</li> <li>• EPJ Data Science (EPDS), 2021</li> <li>• EPJ Data Science (EPDS), 2020</li> <li>• Journal of Language and Social Psychology (JLSP), 2020</li> </ul>	
	<b>Major Conference Paper Reviews</b> <ul style="list-style-type: none"> <li>• ACM International Conference on Web Search and Data Mining (WSDM) 2023 – 2025</li> <li>• International AAAI Conference on Web and Social Media (ICWSM) 2021 – 2025</li> <li>• International World Wide Web Conference (WWW) 2021 – 2025</li> <li>• Conference of the European Chapter of the Association for Computational Linguistics (EACL) 2023</li> <li>• Conference on Empirical Methods in Natural Language Processing (EMNLP) 2022</li> </ul>	
REFERENCES	<b>Meeyoung Cha, Ph.D.</b> <i>Scientific Director</i> of the Max Planck Institute for Security and Privacy (MPI-SP) in Bochum, Germany <i>Professor</i> in School of Computing at KAIST, South Korea Email: mia.cha@mpi-sp.org ( <a href="https://www.mpi-sp.org/cha">https://www.mpi-sp.org/cha</a> )	
	<b>Cheng-Te Li, Ph.D.</b> <i>Professor</i> of Computer Science and Information Engineering at National Cheng Kung University, Taiwan Email: chengte@ncku.edu.tw ( <a href="https://sites.google.com/view/chengteli/">https://sites.google.com/view/chengteli/</a> )	
	<b>Bumseok Jeong, M.D., Ph.D.</b> <i>Professor</i> of Graduate School in Medical Science and Engineering (GSMSE) at KAIST, South Korea Email: bs.jeong@kaist.ac.kr ( <a href="https://drshrink.github.io">https://drshrink.github.io</a> )	
	<b>Lev Manovich, Ph.D.</b> <i>Presidential Professor</i> of Computer Science at the City University of New York (CUNY)'s Graduate Center, USA Email: manovich.lev@gmail.com ( <a href="http://manovich.net">http://manovich.net</a> )	