

## Sungkyu Shaun Park, Ph.D.

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CONTACT INFORMATION	Data Science Group, Institute for Basic Science (IBS) 55, Expo-ro, Yuseong-gu, Daejeon, Republic of Korea, 34126	e-mail: shaun01.park@gmail.com homepage: <a href="http://shaun.kr">http://shaun.kr</a>
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>	
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 and 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</b>, Suwon, South Korea</p> <p><i>B.S. in Information and Communication Engineering</i> February 2009</p>	
SELECTED PUBLICATIONS	<p><b>S. Park</b>, 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 <i>proc. of the 7<sup>th</sup> International Conference on Computational Social Science (IC<sup>2</sup>S<sup>2</sup>)</i>, 2021. (Extended Abstract)</p> <p><b>S. Park</b>, 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. <i>Journal of Medical Internet Research (JMIR)</i>, 03/03/2021:23272, 2021. doi:10.2196/23272. <i>Impact Factor</i> = 5.03 [SCIE]</p> <p>S. Park, S. Han, S. Kim, D. Kim, <b>S. Park</b>, S. Hong, and M. Cha. Improving Unsupervised Image Clustering With Robust Learning. In <i>proc. of the 2021 IEEE Conference on Computer Vision and Pattern Recognition (CVPR)</i>, 2021. <i>Acceptance rate for full paper</i> <math>\approx</math> 25%</p> <p><b>S. Park</b>, S. W. Lee, D. Ahn, and M. Cha. Designing a Mobile Intervention Platform to Help Alleviate Insomnia Symptoms in College Students. <i>Journal of the Korean Society of Biological Therapies in Psychiatry</i>, 27(1):50–58, 2021. (Paper in Korean)</p> <p><b>S. Park</b>, 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 <i>proc. of The Web Conference 2021 (WWW)</i>, 2021. <i>Acceptance rate for full paper</i> = 20.6%</p> <p><b>S. Park</b>, J. Y. Park, J. Kang, and M. Cha. The Presence of Unexpected Biases in Online Fact-checking. <i>Harvard Kennedy School (HKS) Misinformation Review</i>, 2021. doi:10.37016/mr-2020-53.</p>	

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)*, accepted for the publication, 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

**Successfully entering the ride-sharing industry: focusing on infrastructure development and service operation**, Uiwang, South Korea June 13, 2017

- Hyundai Motor Group

**Facebook activities reveal the depressive states of users**, Daegu, South Korea December 13, 2013

- Daegu Gyeongbuk International Social Network Conference (DISC) 2013

TEACHING EXPERIENCE

**Teaching Assistant**, KAIST GCT576 - Social Computing Fall 2018

**Teaching Assistant**, KAIST CS564 - Introduction to Big Data Analytics Using R Spring 2018

**Instructor**, Kangnam University - Youth Career Academy Mentoring: Big Data Expert Course for Senior Undergraduate Students January – February 2016

PROFESSIONAL EXPERIENCE

**Postdoctoral Fellowship** at Institute for Basic Science (IBS), Daejeon, Korea (Full-time) Sep. 2020 – Present  
 Chief Investigator: Dr. Meeyoung Cha

- *Data Science Group, Center for Mathematical and Computational Sciences*
- Focused on four research domains: 1) mental health; 2) text mining; 3) unsupervised learning; 4) cultural analytics

**Research Intern** at Nokia Bell Labs, Cambridge, United Kingdom (Full-time) June – August 2019  
 Department Head: Dr. Daniele Quercia

- *Social Dynamics Team*
- Developed a smartwatch application that can retrieve health signals and self-reported mood data

**Co-founder & Chief Operating Officer** at Kaniza Lab Co., Ltd, Seoul, Korea March 2015 – January 2017

- *Business Operation and Data Analysis Team (Full-time)*
- Launched and managed two mobile-based on-demand platforms on public transportation domains

**Research Engineer** at Samsung Electronics, Suwon, South Korea (Full-time) January 2009 – April 2012  
 Director: Mr. David Yoonwoo Lee

- *Standards Certification Lab. in Business Planning Group at Visual Display Business*
- Dealt with standardization of technical formats on TV and home entertainment products

TECHNICAL SKILLS

Fluency in quantitative methods: statistics, machine- and deep-learning, social network analysis, and mobile- and wearable-computing  
 Programming: Python, PyTorch, R, MATLAB, JavaScript, and C

## REFERENCES

**Meeyoung Cha, Ph.D.**

*Chief Investigator (CI)* of Data Science Group at Institute for Basic Science (IBS), South Korea

*Associate Professor* of School of Computing at KAIST, South Korea

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**Daniele Quercia, Ph.D.**

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**Sang Won Lee, M.D., Ph.D.**

*Funding Assistant Professor* of Department of Psychiatry at Kyungpook National University Chilgok Hospital, Korea

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**Bumseok Jeong, M.D., Ph.D.**

*Professor* of Graduate School of Medical Science and Engineering (GSMSE) at KAIST, Korea

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