

Kibum Moon

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RESEARCH INTEREST

Mental well-being, happiness, emotion, close relationships, ML/DL, psychological assessments, data psychology

EDUCATION

Korea University	Sep. 2015 – Feb. 2018
M.A. in Clinical and Counseling Psychology	Seoul, Korea
Thesis title: The Effect of Implicit Attitude Toward a Partner on Relationship Satisfaction and Relational Conflict	
Advisor: Young-gun Ko, Ph.D.	
Cumulative GPA: 4.0 / 4.0	
Korea University	Mar. 2009 – Feb. 2015
B.A. in Psychology	Seoul, Korea
B.A. in Science Technology Studies (double major)	
Cumulative GPA: 3.91 / 4.0	
University of New South Wales	Feb. 2014 – May 2014
Exchange student in the School of Psychology	Sydney, Australia

PUBLICATIONS

1. **Moon, Kibum**, Kim, J., Lee, J. (*in press*) The Early Prediction Model of Student Performance Based on Deep Neural Network Using Massive LMS Log Data. *Journal of the Korea Contents Association*.
2. **Moon, Kibum**, Kim, S., Kim, J., Kim, H., & Ko, Y. (2020). The Mirror of Mind: Visualizing Mental Representations of Self Through Reverse Correlation. *Frontiers in Psychology*, 11, 1149.
doi: [10.3389/fpsyg.2020.01149](https://doi.org/10.3389/fpsyg.2020.01149)
3. Lee, J., **Moon, Kibum**, Han, S., Lee, S., Kwon, H., Han, J. (2021) Development and Application of an AI-Powered Adaptive Course Recommender System in Higher Education: An Example from K University. *Journal of Educational Technology*.
doi: [10.17232/KSET.37.2.267](https://doi.org/10.17232/KSET.37.2.267)
4. Kim, S., **Moon, Kibum**, Kim, J., & Ko, Y. (2020). The Relationship Between Borderline Personality Features and Affective Responses to Altering Emotional Context. *Current Psychology*.
doi: [10.1007/s12144-020-01077-5](https://doi.org/10.1007/s12144-020-01077-5)
5. Kim, J., **Moon, Kibum**, & Ko, Y. (2020). A Validation of the Korean Version of Adolescent Positive Mental Health Scale. *Korean Journal of Health Psychology*, 25(4), 823-834.
doi: [10.17315/kjhp.2020.25.4.012](https://doi.org/10.17315/kjhp.2020.25.4.012)
6. Lee, S., **Moon, Kibum**, & Ko, Y. (2019). The Effects of Ego Depletion and Psychological Burden on Fatigue in Everyday Life: Focusing on Narcissism. *Korean Journal of Clinical Psychology*, 38(1), 60-69. doi: [10.15842/kjcp.2019.38.1.005](https://doi.org/10.15842/kjcp.2019.38.1.005)
7. Back, I., **Moon, Kibum**, & Ko, Y. (2019). A Validation Study of Mental Health Two-Factor Model: In a Sexual Minority Population. *The Korean Journal of Woman Psychology*, 24(4).

PATENTS

1. **Moon, Kibum**, Lee, J., Lee, S., Han, S., Kwon, H., Han, J., Kim, G.T. (2021). System and Method for Recommendation of Course Based on Course Similarity and Computer Program for the Same. Application Number: 10-2021-0042245.

2. **Moon, Kibum**, Lee, J., Lee, S., Han, S., Kwon, H., Han, J., Kim, G.T. (2021). System and Method for Recommendation Major Based on Keywords of Interests by Users and Computer Program for the Same. Application Number: 10-2021-0064780

MANUSCRIPTS UNDER REVIEW & IN PREPARATION

1. Kim, J., **Moon, Kibum**, Kim, S., Kim, H., & Ko, Y. (*under review at Journal of Personality*) The Relationship between Mental Representations of Self and Social Evaluation: Examining the Validity and Usefulness of Visual Proxies of Self-Image.
2. Min, H., Kim, J., **Moon, Kibum**, Kim, S., Kim, J., Ko, Y. (*under review at BMC Psychology*) Development and Validation of COVID-19 Impact Scale.
3. Kim, H., Kim J., **Moon, Kibum**, Jeong, J., Ko, Y. (*preparing to submit again*) Effects of Communal Narcissism and Altruism on Psychosocial Maturity.
4. **Moon, Kibum**, Lee, H., & Ko, Y. (*preparing to submit again*) Implicit Accommodation to an Angry Romantic Partner: Effects on Romantic Relationship Persistence.

CONFERENCE PRESENTATIONS

1. **Moon, Kibum** (2020). The Impact of COVID-19 on Quality Education: Focusing on Online Learning. Oral presentation at the 3rd KU Innovation Forum, Seoul, Republic of Korea
2. **Moon, Kibum** & Ko, Y. (2018). Facial Expression Accommodation Predicts Quality and Durability of Romantic Relationships. Poster presentation at the 30th APS Annual Convention, San Francisco, CA. U.S.
3. **Moon, Kibum**, Kim, H., Kim, S., Lee, C., & Ko, Y. (2017). Validation Study of the Korean version of the Balanced Index of Psychological Mindedness. Poster presentation at the 2017 Fall Conference of Korean Clinical Psychology Association, Seoul, South Korea
4. Kim, S., Kim, J., **Moon, Kibum**, Kang W., Ko, Y. (2021). The Relationship between Meta-emotion and Mental Health. Poster presentation at the 2021 Spring Conference of Korean Clinical Psychology Association, Seoul, South Korea
5. Kim, D., Shin, W., Han, K., Lee, J., **Moon, Kibum**, Lee, S., Han, S., Han, S. (2020). A system for recommending university liberal arts courses using collaborative filtering. Short Paper at the 2020 Fall Conference of Korean Institute of Industrial Engineers, Seoul, South Korea
6. Kim, H., **Moon, Kibum**, Kim, J., & Ko, Y. (2020). The Relationship Between Communal Narcissism and Altruism. Poster presentation at the 2020 Fall Conference of Korean Clinical Psychology Association, Online
7. Kim, J., **Moon, Kibum**, Kim, S., & Ko, Y. (2020). Clinical Usefulness of Visualizing Mental Representations of Self through Reverse Correlation Method to Assess Depression and Anxiety. Poster presentation at at 2020 APS Virtual Poster Showcase, Virtual.
8. Kim, J., **Moon, Kibum**, Park, J., Kim, S., & Ko., Y. (2020). The Relationship Between Mental Health and Belongingness Orientation of the Homeless. Poster presentation at the 2020 Spring Conference of Korean Clinical Psychology Association, Online
9. Lee, J., **Moon, Kibum**, Lee, S., Han, S., Han, J., & Kwon, H. (2019). Convergence in University Interdisciplinary Education. Oral presentation at 2019 Korea Academy of Complexity Studies, Seoul, Republic of Korea
10. Park, K., Jung, S., **Moon, Kibum**, Pyo, S., & Choi, K. (2016). Empirically Supported Treatments in Korea. Oral presentation at the 2016 Spring Conference of Korean Clinical Psychology Association, Chuncheon, Korea

SCHOLARSHIPS

Research Assistance Scholarship

015

Department of Psychology, Korea University

– 2017

Full tuition for 4 semesters (\$23,600)

*A merit-based scholarship awarded for students who have excellent research potential and actively contribute to the academic development of the department

KU Alumni Scholarships

2014

The Alumni Association, Korea University

Full tuition (\$4,200)

*Among 1 of 177 students at Korea University selected for this merit-based scholarship. Selected based on academic excellence and potential for positively impacting society

Choonpha Hwangchungha Scholarships

2013

The Choonpha Hwangchungha Scholarship Foundation

Full tuition (\$4,200)

*1 of 6 students at Korea University selected for this merit-based scholarship. Selected based on academic excellence

Sung Ryun Scholarships

2013

The Sung Ryun Scholarship Foundation

Full tuition (\$4,200)

*1 of 65 students selected across South Korea for this scholarship. Selected based on the potential to become a global leader (and family household income <\$55,000/year)

Study Scholarships

2012, 2014

Korea University

Awarded for high GPA (\$1,000 / \$1,100)

*Awarded for high academic achievement and financial need

Honors Scholarships

2009

Department of Psychology, Korea University

Students with a high GPA in the department

35% of tuition (\$1,250)

*A merit-based scholarship awarded for students in the top 5% of GPA in the Department

ACADEMIC HONORS & AWARDS

Participation Award in AI Hub Data Utilization Idea Competition

Nov. 2019

National Information Society Agency (NIA)

Best Oral Presentation Award

April 2016

Korean Clinical Psychology Association (KCPA)

Semester High Honors

2014

Department of Psychology, Korea University

– 2009

Students with a GPA of over 4.0 for 5 semesters

WORK & RESEARCH EXPERIENCE

Data Scientist

Oct. 2019

Data Hub Team, Office of Digital Information, Korea University

– Present

Advisor: Gyu-Tae Kim, Ph.D.

Project: AIKU: Recommendation System based on ML/DL in the Context of Higher Education

- AIKU recommends lectures, majors, and extra-curricular activities for college students that fit individual needs and interests.
- Primary responsibilities included developing recommender algorithms using ML/DL techniques (NLP, Bayesian probability, cosine similarity, UMAP, and GCN, etc.) and applying for two patents as a primary inventor.
- This project was awarded as one of two representative programs of Korea University for the (government-funded) University Innovation Support Project and covered by +10 media outlets as the first case of the official AI service provided by university in South Korea.

Project: Early Prediction Model of Academic Achievement and Mental Health of College Students Based on Deep Neural Networks Using Online Learning Big Data

- Investigation to develop early prediction models of college students' academic achievement and mental health based on Recurrent Neural networks using massive log data in the Learning

Management System (LMS).

Clinical Research Assistant

Student Counseling Center, Korea University

Principal Investigator: Young-gun Ko, Ph.D.

Feb. 2019

– Sep. 2019

Project: *Visualizing Self-image Using Reverse Correlation Method*

- Investigation to generate and validate visual mental representations of self-image by employing *Reverse Correlation* task – a two-image forced-choice task to generate a classification image of self (*self-CI*) that shows how people conceive themselves in mind.
- The convergent and discriminant validity of *self-CIs* as psychological measurements were examined in relation to self-reports and physical appearance.
- This research was published in *Frontiers in Psychology* and recognized as the first work to incorporate *Reverse Correlation* method to visualize self-perception.

Project: *Borderline Personality Features and Emotional Recovery*

- Investigation of the association between borderline personality features and *prompt* emotional recovery by assessing residual antipathy to neutral facial stimuli followed by anger and disgust facial expressions.
- Contributed to developing research design and data analysis; built the computerized task using *Psychoy* and generated dynamically varying facial stimuli using facial morphing method using *python* and *OpenCV*; and reviewed the manuscript for publication.

Post-Master Research Associate

Mentoring Counseling Center of College of Liberal Arts at Korea University

Advisor: Young-gun Ko, Ph.D.

Mar. 2018

– Jan. 2019

Project: *Validation of the Korean Version of Positive Mental Health Scales*

- Empirical validation studies on the two-factor structure of the Korean version of Positive Mental Health Scales using diverse samples, including adolescent and sexual minorities.
- Conducted exploratory and confirmatory factor analyses using *lavaan* and *psych* packages in R; wrote the results section of manuscripts; and reviewed the manuscript for publication.

Project: *The Effects of Ego Depletion and Psychological Burden on Fatigue in Everyday Life*

- Investigation using Experience Sampling Method (ESM) to explore the moderating effect of overt and covert narcissism on the relationship between psychological burden and fatigue in daily life.
- Conducted multilevel analyses using *lmer* package in R to handle the nested structure of the ESM datasets; wrote a significant portion of the manuscript.

Clinical Psychology Master's Program Student

Department of Psychology, Korea University

Advisor: Young-gun Ko, Ph.D.

Sep. 2015

– Feb. 2018

Project: *Implicit Accommodation and Romantic Relationship Longevity*

- Investigation of the predictive effect of facial accommodation on relationship persistence as implicit emotional regulation.
- Implicit accommodation was measured by the valence of the facial reaction to romantic partner's angry face using the automated facial coding software (*Affdex*) and compared its predictive effect with that of self-reports and facial mimicry (i.e., the valence of the facial reaction to romantic partner's smiling face).

CLINICAL & PRACTICE EXPERIENCE

Clinical Research Assistant

Student Counseling Center, Korea University

Principal Investigator: Young-gun Ko, Ph.D.

Feb. 2019

– Sep. 2019

Project: *Mental Fitness Program: Positive Psychology-Based Intervention*

* Though I participated in the Mental Fitness Project consistently while collaborating with Dr. Ko from 2015 to 2019, for the convenience of space, all relevant information were listed below

- Mental Fitness Program consists of psychoeducation and practices designed to promote mental well-being and tacit knowledge of happiness based on positive psychological concepts.
- Provided Mental Fitness group and individual therapy
 - college students: 26 sessions, 3 groups, 75 minutes each
 - romantic couples and singles: 8 sessions, 8 groups, 150 minutes each
 - Junior High School Students: 12 sessions, 1 group, 50 minutes each
 - individual therapy: 12 sessions, 50 minutes each
- Designed interactive psychological assessment reports that provide personalized interpretations using *R Shiny*; developed and provided a prototype application for positive dialogue training using *Google Natural Language API*, *Firebase*, and *R Shiny*; built a dashboard for teachers to monitor the peer relationship of students in a classroom using *R shiny*.

Project Manager

Mentoring Counseling Center of College of Liberal Arts at Korea University

Advisor: Young-gun Ko, Ph.D.

Oct. 2015

– Feb. 2018

Project: *The CORE Personality and Aptitude Psychological Assessments*

- Government-funded project to provide psychological assessments including Rorschach inkblot test, adaptive mechanism interview, career aptitude and intelligence assessments, MMPI, WCST, and self-reported scales.
- Participated as a project manager for 2.5 years with primary responsibilities including planning and managing the whole process of the project with +1,200 participants; managing budget over \$100,000; designing assessment packages; recruiting participants; scheduling interview and interpretation sessions.
- Conducted, scored, and provided +150 individual interpretation sessions.

Clinical Practicum Student

Department of Psychology, Korea University; Department of Psychiatry, CHA Bundang Medical Center

Supervisor: Eunjoo Yang, Ph.D., Kihye Sung, licensed clinical psychologist

- Participated in clinical practicum
 - Led a semi-structured therapy group: 8 students, 12 sessions, 75 minutes each
 - Provided individual therapy: 10 sessions, 50 minutes each
 - Provided Mental Fitness group therapy for psychiatric inpatients: 3 groups, 3 sessions, 50 minutes each
 - observed administering full batteries assessments and participated in group therapy and weekly morning seminars

PROFESSIONAL SKILLS

Programming Languages & Statistical Software

R, Python, SQL, HTML, Markdown, JavaScript, Latex, Matlab, Linux, Git, NetLogo, M-Plus.

Data Visualization Tools

R Shiny, Plotly/Dash, Gephi, Tableau, Power BI, Adobe Photoshop.

Machine Learning & Deep Learning Frameworks

Recommendation system, Natural Language Processing (NLP), Predictive models, dimension reduction, time series analysis, Pytorch, Tensorflow, Scikit-learn, Stellargraph, Genism, Tidymodels.

Statistical Analysis

Multilevel models, structural equation models (SEM), generalized regression models, Bayesian analyses, social network analyses, actor-partner interdependent models (APIM), ecological diversity analyses, experience sampling method (ESM).

Psychological Assessment (proficient in implementing & interpretation)

Rorschach inkblot test, Korean Wechsler adult intelligence scale-IV, defense mechanism interview, Wisconsin card sorting test, the house-tree-person test (HTP), MMPI-2, sentence completion test (SCT).

TEACHING & MENTORING EXPERIENCE

- Graduate Student Instructor for *Life Designing and Self Understanding (SPGE208)* at Korea University – led weekly discussion classes: 20-25 students/class in the Spring Semesters of 2017-2019
With: Eunjoo Yang, Ph.D.
- Provided research mentorship for undergraduate researchers of UMA, an undergraduate research association funded by the Korean Psychological Association in 2016-2019 and 2021
- Hosted R programming and advanced statistics workshops for –
 - (Mar. 2020) Administrative officers: 5 sessions, 60 minutes each
 - (Feb. 2020) Licensed psychologists: 6 sessions 75 minutes each
 - (Feb. 2018 / Mar. 2019) Psychology undergraduate/graduate students: 4/6 sessions 75 minutes each

ADDITIONAL & VOLUNTEER ACTIVITIES

- President of the breakdancing team (WACK) – won two community b-boying contests
- Vice president of the student association of the Seoul Foreign Language High School
- Participated for the Student Welfare Committee (KU-Well) – organized student welfare programs
- Participated in the Korea University Buddy Assistant (KUBA) – helped two exchange students adjust to Korean culture and campus life
- Serviced for two years as an academic secretary of the Mental Fitness Positive Psychology Research Association under the Korea Clinical Psychology Association
- Enthusiastic scuba diver; dived in Iceland, Great Barrier Reef, Fiji, and the Philippines.

REFERENCES

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