Kibum Moon

38, Deongneung-ro 60ka-gil, Dobong-gu, Seoul, South Korea |
+82-10-5236-5339 | a072826@gmail.com

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
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
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
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
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
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
	– 2009

Department of Psychology, Korea University
Students with a GPA of over 4.0 for 5 semesters

WORK & RESEARCH EXPERIENCE

Data Scientist	Oct. 2019
	– Present

Data Hub Team, Office of Digital Information, Korea University
Advisor: Gyu-Tae Kim, Ph.D.
Project: *Recommendation System based on ML/DL in Higher Education*
- One of two representative programs of Korea University for *the (government-funded) University Innovation Support Project*
- The system provided personalized recommendations of lectures, majors, and extra-curricular activities for college students to help them explore broader fields and find the right choice that fits their needs
- Primary responsibilities included prototyping the main concept of the system, conducting educational big-data mining, and developing core recommendation algorithms based on ML/DL techniques (*TF-IDF, Bayesian probability, cosine similarity, UMAP, and GCN, etc.*)

Project: *Early Prediction Model* of *Academic Achievement and Mental Health of College Students Based on Deep Neural Networks Using Online Learning Big Data*
- Investigation on the performance of early prediction model of college students' academic achievement and mental health based on deep learning methods by employing massive log data in the Learning Management System (LMS)

Clinical Research Assistant	Feb. 2019
	– Sep. 2019

Student Counseling Center, Korea University
Principal Investigator: Young-gun Ko, Ph.D.
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 diverse activities and psycho-education designed to learn and practice tacit knowledge of happiness to promote well-being and optimal functioning in daily lives based on positive psychological concepts, including Learned Optimism, Character Strengths, Adaptive Mechanisms, and Psychological Assimilation, and so on.
- Provided the Mental Fitness group therapy as a group leader for college students (*26 sessions, 3 groups, 75 minutes*), romantic couples and singles (*8 sessions, 8 groups, 150 minutes*), and Junior High School Students (*12 sessions, 1 group, 50 minutes*); provided an individual Mental Fitness therapy (*12 sessions, 50 minutes*)
- Designed interactive psychological assessment reports that provide personalized interpretations using *R Shiny*; developed and provided a prototype application of Learned Optimism-based positive dialogue training using *Google Natural Language API, Firebase, and R Shiny*; built a

dashboard for teachers to visualize the peer relationship of students in a classroom.

Project: *Visualizing Self-image Using Reverse Correlation Method*
- Investigation to generate and validate visual mental representations of self-image by employing the reverse correlation task – a two-image forced-choice task to generate a classification image that shows how people conceive themselves in mind
- Initiated, prepared, and revised the manuscript from conceptualization to dissemination; designed experimental paradigm, generated experimental stimuli, and built the on and offline versions of the RC task using python and Psychopy; conducted literature review, data collection, and data analysis; drafted all documentation for the university IRB

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 the research design and conducting data analysis; generated the computerized task and dynamically varying facial stimuli using facial morphing method through python and OpenCV; reviewed the manuscript for publication

Post-Master Research Associate   Mar. 2018
Mentoring Counseling Center of College of Liberal Arts at Korea University   – Jan. 2019
Advisor: Young-gun Ko, Ph.D.

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 with adolescent and sexual minority samples
- Conducted exploratory and confirmatory factor analysis using *lavaan* and *psych* packages in R; wrote the part of the results section and reviewed the whole manuscript for publication

Project: *The Effects of Ego Depletion and Psychological Burden on Fatigue in Everyday Life*
- A study using the 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   Oct. 2015
Department of Psychology, Korea University   – Feb. 2018
Advisor: Young-gun Ko, Ph.D.
Project: *Implicit Accommodation and Romantic Relationship Longevity*
- Examination on the predictive effect of implicit facial accommodation on romantic relationships persistence
- Implicit facial accommodation was measured by the facial reaction to romantic partner's angry face with the automated facial coding software (*Affdex*) and compared with the predictive effect of facial mimicry (i.e., facial reaction to romantic partner's smiling face)

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, and self-reported scales.
- Primary responsibilities as a project manager included planning and managing the whole process of the project with +1,200 participants for 2.5 years, including planning the project; designing assessment packages; producing promotional materials and recruiting participants; scheduling room and assessment sessions; creating an automated system for generating assessment reports of participants; conducting and interpreting 150+ individual sessions

PROFESSIONAL SKILLS
Programming Languages & Statistical Software
R, Python, SQL, HTML, Markdown, JavaScript, Latex, Matlab, M-Plus, Git, NetLogo, etc.

Data Visualization Tools
R Shiny, Plotly/Dash, Gephi, Tableau, Power BI, Adobe Photoshop, etc.

Machine Learning & Deep Learning Frameworks
Recommendation system, natural language processing (NLP), dimension reduction, computer vision, pytorch, tensorflow, scikit-learn, stellargraph, genism, tidymodels, etc.

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

- Participated for five years (2016-2019, 2021) as a research mentor for undergraduate researchers in UMA, an undergraduate research association funded by the Korean Psychological Association
- Paid Assistant Instructor (the Spring Semester in 2017-2019)
  Life Designing and Self Understanding (*SPGE208*) at Korea University
  Lecturer: Eunjoo Yang, Ph.D.
- Hosted R programming and advanced statistics workshops for administrative officers, psychology undergraduate/graduate students, and licensed psychologists

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

Young-gun Ko, Ph.D.
Professor
School of Psychology
Korea University

Phone: +82-2-3290-2863
E-mail: elip@korea.ac.kr
Address: 145 Anam-ro, Seongbuk-Gu, Seoul, South Korea, 02841

Gyu-Tae Kim, Ph.D.
Professor
Office of Digital Information
Korea University

Phone: +82-2-3290-3250
E-mail: gtkim@korea.ac.kr
Address: 145 Anam-ro, Seongbuk-Gu, Seoul, South Korea, 02841

Eunjoo Yang, Ph.D.
Professor
School of Psychology
Korea Univerity

Phone: +82-2-3290-2865
E-mail: yange@korea.ac.kr
Address: 145 Anam-ro, Seongbuk-Gu, Seoul, South Korea, 02841

Hackjin Kim, Ph.D.
Professor
School of Psychology
Korea University

Phone: +82-2-3290-2864
E-mail: hackjinkim@korea.ac.kr
Address: 145 Anam-ro, Seongbuk-Gu, Seoul, South Korea, 02841