

Jaeyeong (Jayce) Yang

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Research Interests

Computational modeling ; Cognitive processes ; Reinforcement learning ; Decision-making ; Optimal experimental designs ; Adaptive design optimization

Education

Seoul National University

Seoul, South Korea

PH.D. IN PSYCHOLOGY

March 2020 – Present

- Advisor: Prof. Woo-Young Ahn
- Area of Study: Cognitive Psychology

Seoul National University

Seoul, South Korea

M.A. IN PSYCHOLOGY

March 2018 – February 2020

- Advisor: Prof. Woo-Young Ahn
- Area of Study: Cognitive Psychology

Seoul National University

Seoul, South Korea

B.A. IN PSYCHOLOGY & B.S. IN COMPUTER SCIENCE AND ENGINEERING

March 2011 – February 2018

Publications

Kwon, M.* , Kim, H., **Yang, J.**, Hur, J., Lee, T.-H., & Ahn., W.-Y. (under review). Daily caffeinated soda intake is associated with impaired working memory and higher impulsivity in children. *bioRxiv*. <https://doi.org/10.1101/2021.02.17.431718>.

Kim, M.* , **Yang, J.*** , Ahn., W.-Y., & Choi, H. J. (2021). Machine Learning Analysis to Identify Digital Behavioral Phenotypes for Engagement and Health Outcome Efficacy of an mHealth Intervention for Obesity: Randomized Controlled Trial. *Journal of Medical Internet Research*. <https://doi.org/10.2196/27218>.

Park, H., **Yang, J.**, Vassileva, J., & Ahn, W.-Y. (2021). Development of a novel computational model for the Balloon Analogue Risk Task: The exponential-weight mean-variance model. *Journal of Mathematical Psychology*. <https://doi.org/10.1016/j.jmp.2021.102532>.

Hur, J., **Yang, J.**, Doh, H., & Ahn, W.-Y. (2020). Mapping fNIRS to fMRI with Neural Data Augmentation and Machine Learning Models. *NeurIPS 2020 BabyMind Workshop*.

Yang, J., Pitt, M. A., Ahn, W.-Y., & Myung, J. I. (2020). ADOpy: A Python Package for Adaptive Design Optimization. *Behavioral Research Methods*. <https://doi.org/10.3758/s13428-020-01386-4>.

* indicates co-first authors.

Oral Presentations

Yang, J., Kim, H., Pitt, M. A., Myung, J. I., & Ahn, W.-Y., (2020). Identifying computational markers of future nicotine intake using adaptive design optimization in a smartphone app. *Talk given at the Virtual MathPsych/ICCM 2020*.

Yang, J., Pitt, M. A., Ahn, W.-Y., & Myung, J. I. (2019). ADOpy: A Python package for Adaptive Design Optimization. *Talk given at the Annual Meeting of the Korean Cognitive Science Society, Seoul, South Korea*.

Yang, J., Pitt, M. A., Ahn, W.-Y., & Myung, J. I. (2019). Optimizing the Design of an Experiment using the ADOpy Package: An Introduction and Tutorial (workshop). *Talk given at the Annual Meeting of the Cognitive Science Society, Montreal, Canada*.

Poster Presentations

Kim, H., Kim, S., Kwon, M., **Yang, J.**, Ahn, W.-Y. (2019). Effects of early life stress and social resources on neurocognitive functions : A large replication study. *Poster presented at the Society for Research in Psychopathology, Buffalo, New York*.

- Yang, J. Pitt, M. A., Ahn, W.-Y., & Myung, J. I. (2019).** Design Optimization of Choice under Risk and Ambiguity task using ADOPy. *Poster presented at the Annual Meeting of the Society for Mathematical Psychology, Montreal, Canada.*
- Yang, J. Pitt, M. A., Ahn, W.-Y., & Myung, J. I. (2019).** ADOPy: Automatic Design Optimization for Experimental Tasks. *Poster presented at the Multi-disciplinary Conference on Reinforcement Learning and Decision Making, Montreal, Canada.*
- Kwon, M., Kim, H., **Yang, J.**, & Ahn, W.-Y. (2019). Identifying behavioral and neural predictors of caffeinated soda intake in childhood using a large database from the ABCD study. *Poster presented at the Annual Meeting of the Korean Cognitive Science Society, Seoul, South Korea.*
- Yang, J. & Ahn, W.-Y. (2018).** Theory- and data-driven characterization of individual differences using computational modeling and a Bayesian hierarchical mixture approach. *Poster presented at the Annual Meeting of the Society for Research in Psychopathology, Indianapolis, Indiana.*
- Yang, J. & Ahn, W.-Y. (2018).** Application of a Bayesian hierarchical mixture approach to computational psychiatry: Theory- and data-driven characterization of individual differences. *Poster presented at the Annual Meeting of the Society for Mathematical Psychology, Madison, Wisconsin.*

Teaching

Seoul National University

- Teaching Assistant, *Seminar in Experimental Psychology: Computational Modeling* (graduate)

Spring 2018, Spring 2019

Academic Services

Manuscript Review

- Biological Psychiatry (with advisor), eLife (with advisor), PLOS Computational Biology (with advisor), Journal of Mathematical Psychology

Skills

- Programming** Python (fluent), R (fluent), Stan, C/C++, LaTeX
- Neuroimaging** SPM, FSL, Freesurfer, Nipype
- Web** HTML & CSS, LESS, SCSS, Django, JavaScript, PHP, JSP
- Languages** Korean (native), English (fluent)

Experience

GPU Hackathon 2019

Brookhaven National Laboratory

HACKATHON PARTICIPANT

September 23–27, 2019

I participated as a domain scientist and collaborated with computer scientists to predict cognitive & pathological variables in ABCD (Adolescent Brain Cognitive Development) dataset based on functional MRI neuroimaging data, using state-of-the-art deep neural network models.

Quantitative Psychology Laboratory

Seoul National University

RESEARCH ASSISTANT

September 2015 – September 2017

- Advisor: Prof. Cheongtag Kim

Republic of Korea Air Force, Weather Wing

Gyeryong, South Korea

SERVER MANAGER & WEB DEVELOPER (COMPULSORY MILITARY SERVICE)

March 2013 – March 2015

Honors and Awards

- 2021 Samil Scholarship in Fall 2021
- 2020 SNU Graduate Research Grant in Social Sciences in Spring 2020
- 2019 Best Oral Presentation Award in Annual Meeting of the Korean Cognitive Science Society
- 2016 Work-Study Scholarships in Spring 2016 and Fall 2016
 - Eminence Scholarship in Fall 2016
 - Kwanak Corporation Scholarship in Spring 2016
- 2015 Kwanak Corporation Scholarship in Fall 2015
 - Samsung Convergence Software Course Mentoring Scholarship in Fall 2015
- 2012 Work-Study Scholarships in Spring 2012 and Fall 2012

References

Prof. Woo-Young Ahn

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- Website: <https://ccs-lab.github.io>

Prof. Cheongtag Kim

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