CURRICULUM VITAE

HOJIN JANG

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▪ EDUCATION

Vanderbilt Univ., Nashville, Tennessee, United States Sep. 2021 – Present
Postdoctoral Fellow
- Major : Psychology
- Advisor : Dr. Frank Tong

Vanderbilt Univ., Nashville, Tennessee, United States Sep. 2016 – Aug. 2021
Doctor of Philosophy
- Major : Psychology | GPA : 3.85 / 4.00
- Advisor : Dr. Frank Tong

Korea Univ., Seoul, South Korea Sep. 2014 – Aug. 2016
Master of Engineering
- Major : Brain and Cognitive Engineering | GPA : 4.02 / 4.50
- Advisor : Dr. Jong-Hwan Lee

Korea Univ., Seoul, South Korea Mar. 2008 - Aug. 2014
Bachelor of Engineering
- Major : Computer Science | GPA : 3.68 / 4.50
- Advisor : Dr. Hee-Jo Lee

▪ RESEARCH INTEREST

Deep Learning, Machine Learning, Human Visual System, Object Recognition, Visual Attention and Learning, Brain Encoding and Decoding, Functional Magnetic Resonance Imaging

▪ PUBLICATION

1. Jang, H., Plis, S. M., Calhoun, V. D., & Lee, J. H. (2017). Task-specific feature extraction and classification of fMRI volumes using a deep neural network initialized with a deep belief network: Evaluation using sensorimotor tasks. Neuroimage, 145, 314-328.

2. Jang, H., Kim, H. C., & Lee, J. H. (2020). Test–retest reliability of spatial patterns from resting-state functional MRI using the restricted Boltzmann machine and hierarchically organized spatial patterns from the deep belief network. Journal of Neuroscience Methods, 330, 108451.

3. Jang, H., McCormack, D., & Tong, F. (2021). Noise-trained deep neural networks effectively predict human vision and its neural responses to challenging images. PLoS biology, 19(12), e3001418.

4. Jang H, Tong F. (2021) Convolutional neural networks trained with a developmental sequence of blurry to clear images reveal core differences between face and object processing. Journal of Vision, 21(12):6. doi: https://doi.org/10.1167/jov.21.12.6.

▪ RESEARCH EXPERIENCE

Brain Signal Processing Laboratory, Korea Univ., Seoul, Korea Sep. 2014 – Aug. 2016
Research Trainee
- Advisor : Prof. Jong-Hawn Lee

- Assisted fMRI and EEG experiment for Theory of Mind
- Modified MIST (Montreal Imaging Stress Task) software to adjust to real-time fMRI experiment
- Applied Deep neural network to voxel-unit fMRI volumes and analyzed hierarchical weight and hidden representation with CUDA GPU programming
- Employed Deep belief network with large functional data (e.g., 1,000 Functional Connectome Project, Human Connectome Project) to reveal resting-state brain network

Mind Brain Laboratory, Korea Univ., Seoul, Korea Mar. 2014 - Jul. 2014
Student Assistant
- Advisor : Prof. Byung-Kyung Min
- Assisted EEG and Ultrasound experiment
- Performed basic EEG data analysis such as Fourier Transform and Wavelet

Neurodegeneration Control Research Center, Kyung-Hee Univ., Seoul, Korea Jul. 2013 - Aug. 2013
Research Assistant
- Advisor : Prof. Sung-Hyun Kim
- Cultured hippocampal neuron cells from mice and performed miniprep/maxiprep and transformation/transfection
- Observed neural response to electrical stimuli by electron microscope and analyzed the effect of mitochondria on synapse

▪ SCHOLARSHIP

Best Honors Scholarship, Korea Univ., Seoul, Korea Mar. 2012 - Jul. 2012
- Given to the top-ranked student
- Full tuition

▪ EXTRA-CURRICULAR ACTIVITIES

KUICS (Korea University Institute of Computer Security) Club, Korea Univ., Seoul, Korea
Mar. 2008 - Dec. 2008
- Studied data protection and information security

KWEB (Korea WEB) Club, Korea Univ., Seoul, Korea Mar. 2008 - Dec. 2013
- Studied web programming and network
- Leader of the club (2009)
- Participated in NAVER API Mashup Competition (2009)

Volunteer Teaching Program, Margaret Church, Seoul, Korea Sep. 2008 - Dec. 2008
- Taught mathematics for elementary and middle school students

Global Leadership Center, Korea Univ., Seoul, Korea Dec. 2011 - May. 2012
Assistant Staff
- Prepared for the Global Leadership Summer School and lectures

Exchange Student Program, Laval Univ., Quebec, Canada Jan. 2013 - Apr. 2013
- Information technology management and French elementary courses

English Academic School, Vancouver, Canada May. 2013 - Jul. 2013
- Advanced level

KUBA (Korea University Buddy Assistant) Club, Korea Univ., Seoul, Korea Dec. 2011 - May. 2012
- Assistance for foreign exchange student

▪ MILITARY SERVICE

Fire Direction Center, 36th Artillery Division of Army Jul. 2009 - May. 2011
- Honorably discharged upon completing military service as a sergeant

▪ TECHNICAL SKILLS

Computer Skills

- Web : HTML, CSS, PHP, JavaScript
- Programming : C, C++, C#, JAVA, MATLAB, Python, Assembly

Languages

- Korean (native), English (fluent)