

# Jaehyun Jeong

M.S. GRADUATE

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## Education

### Ulsan National Institute of Science and Technology (UNIST)

Ulsan, Republic of Korea

M.S. in Biomedical Engineering

Feb. 2020 - Aug. 2022

- UNIST Scholarship

### Ulsan National Institute of Science and Technology (UNIST)

Ulsan, Republic of Korea

B.S. in Human Factors Engineering | Computer Science and Engineering

Feb. 2016 - Feb. 2020

- Academic Performance Scholarship (by UNIST)
- Student Expenses (by National Grant)

## Experience

### LVIS Korea

Daegu, Republic of Korea

Research Scientists

Jul. 2024 - present

- Supervisor: HyunJoo Lee

### School of Liberal Arts, UNIST

Ulsan, Republic of Korea

Research Assistant

Nov. 2023 - Jun. 2024

- Supervisor: Jinsook Choi
- Support Humanities and Social Sciences Research, Educational Development, and Research Institute Administration

### BCILAB, UNIST

Ulsan, Republic of Korea

Research Assistant

Sep. 2022 - Sep. 2023

- Supervisor: Sung-Phil Kim
- Conducted in-depth research to identify potential biomarkers for Neurodevelopmental disorders using Electroencephalogram (EEG) features.

## Research Projects

### App-based CBT chatbot using natural language processing (NLP) for academic procrastination

Ulsan, Republic of Korea

Artificial Intelligence Challengers Program (AICP) | [HAILAB](#), UNIST

Mar. 2021 - Sep. 2023

- **Aim:** Developed a chatbot application aimed at assisting university students in overcoming procrastination
- Experiment Design, NLP modeling, Intervention effect analysis, App Engagement analysis

### Precision Diagnosis tool of developmental disorders and Prediction Model for course and prognosis based on digital phenotypes, multimodal imaging, multiomics and core clinical features

Ulsan, Republic of Korea

BCILAB, UNIST

June. 2020 - Sep. 2023

- **Supporting Institution:** Ministry of Science and ICT, Korea
- **Aim:** Study of integration index based on Behavioral, Eye-tracking, and EEG data for diagnosing children with Attention-Deficit/Hyperactivity Disorder (ADHD) and Autism Spectrum Disorder (ASD)
- Collected data by conducting experiments. Also, analyzed EEG data collected during video viewing, joint attention, and the Go/No-go task

### Validation of ICT-based cognitive, emotional, and social skill enhancing program in clinic and community based Autism children

Ulsan, Republic of Korea

BCILAB, UNIST

June. 2018 - Dec. 2020

- **Supporting Institution:** Ministry of Health and Welfare, Korea
- **Aim:** Study on an EEG-based model for evaluating social functions in individuals with high-functioning ASD
- Collected data by conducting experiments. Identify EEG patterns during social tasks, including Conformity, Facial Expression Recognition, and Thin-Slicing, and develop a model to predict Autistic Trait scores

## Publications

### JOURNAL ARTICLES

S. Lee, **J. Jeong**, M.-S. Kim, S. Lee, S.-P. Kim, D. Jung, Development of mobile Intervention for Procrastination Augmented by Semi-generative chatbot in University Students: Randomized Controlled Pilot Trial *JMIR Preprints*. 03/10/2023:53133  
(Available at: <http://doi.org/10.2196/preprints.53133>)

Sung, S., S. Kim, B.-K. Park, D.-Y. Kang, S. Sul, **J. Jeong**, S.-P. Kim. 2021. Study on Facial Expression Change Detection Using Machine Learning Methods with Feature Selection Technique *Mathematics* 9, no. 17: 2062.  
(Available at: <https://doi.org/10.3390/math9172062>)

CONFERENCE POSTERS

M.-K. Kwon, S.-P. Kim, **J. Jeong** (2024). Atypical visuospatial processing and increased peak gamma frequency in individuals with ASD. APA 2024

**J. Jeong**, M.-K. Kwon, S.-P. Kim (2023). Eye fixation-related brain responses to biological motion in children with Attention-Deficit/Hyperactivity Disorder. Poster presented at the IEEE Engineering in Medicine and Biology Society (EMBC), Sydney, Australia

S. Lee, **J. Jeong**, S. Lee, D. Jung (2023). App based CBT chatbot using natural language processing (NLP) for academic procrastination: development and pilot study. Poster presented at the World Congress of Cognitive and Behavioral Therapies (WCCBT), Seoul, Republic of Korea

**J. Jeong**, J.-H. Kim, S.-P. Kim (2022). Tactile assimilation effect depends on individual autistic traits in healthy population. Poster presented at the Society for Neuroscience (SfN), San Diego, USA

Awards

<b>Excellence Prize (Poster presentation)</b>	Korean Society for Emotion and Sensibility   Oct. 2022
<b>Excellence Awards (2nd Prize)</b>	UNIST Innovation Education Center   Dec. 2021
<b>Visitors Choice Awards</b>	UNIST Innovation Education Center   Dec. 2021

Research Interests

- Cognitive Neuroscience
- Sensory-to-Cognition System Integration
- Pattern Recognition and Signal Processing
- Mental Health (Depression, Bipolar disorder)
- Neurodevelopmental Disorders (ASD, ADHD)

Skills

<b>Soft Skills</b>	Critical Thinking, Problem-solving, Continuous self-improvement
<b>Programming</b>	Python (Scikit-learn, Tensorflow, Psychopy), R studio (ggplot2), MATLAB (EEGLAB, Psychtoolbox), C++, HTML/CSS
<b>Quantitative</b>	Experimental Design, Psychometrics, Time-series data pattern recognition (EEG, eye-tracking data), Data visualization
<b>Software</b>	Adobe Indesign, Adobe Illustrator, Adobe Photoshop, Adobe Premier Pro, MS Office

Languages

<b>Korean</b>	● ● ● ● ●
<b>English</b>	● ● ● ● ●
<b>Japanese</b>	● ● ● ● ●