

Dong Hee Lee

Current address: Tokyo, Japan
E-mail: leedonghee@protonmail.com

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Homepage: <https://dongheelee.com>

Education	Sungkyunkwan University M.S., Biomedical Engineering Advisor: Choong-Wan Woo Thesis: “ <i>The Landscape of Pain Prediction: A Systematic Review and Benchmarking Analysis</i> ” Korea National Open University B.S., Computer Science Sungkyunkwan University B.A., Consumer and Family Sciences B.D.S., Data Science	Suwon, South Korea Feb 2022 South Korea Aug 2024 Seoul, South Korea Feb 2019
Research Experience	International Research Center for Neurointelligence, The University of Tokyo Project Academic Specialist Advisor: Yukie Nagai • Built a deep learning model for emotion estimation (arousal and valence) using physiological signals, especially electrocardiography(ECG) Center for Neuroscience Imaging Research, Institute for Basic Science Research Assistant, Graduate Student Researcher Advisor: Choong-Wan Woo • Developed predictive models for pain based on neuroimaging fMRI data by applying machine learning techniques • Conducted more than 150 fMRI experiments (totaling >300 hours) using painful stimuli on healthy participants. • As a lab manager(one-year), administered a wide range of laboratory tasks, including recruiting participants and maintaining computer systems and experimental equipment	Tokyo, Japan Feb 2025 - Present Suwon, South Korea Mar 2019 - Aug 2024
Publications	Lee, D. H., Lee, S., Woo, C. -W. (2025). Decoding Pain: Uncovering the Factors that Affect the Performance of Neuroimaging-based Pain Models. <i>PAIN</i> , https://doi.org/10.1097/j.pain.0000000000003392 Gim, S., Lee, D. H., Lee, S., Woo, C. -W. (2024). Interindividual differences in pain can be explained by fMRI, sociodemographic, and psychological factors. <i>Nature Communications</i> , 15, 7883. https://doi.org/10.1038/s41467-024-51910-9 Kohoutová, L., Atlas, L. Y., Büchel, C., Buhle, J. T., Geuter, S., Jepma, M., Koban, L., Krishnan, A., Lee, D. H., Lee, S., Roy, M., Schafer, S. M., Schmidt, L., Wager, T. D., Woo, C. -W. (2022). Individual variability in brain representations of pain. <i>Nature Neuroscience</i> , 1-11. https://doi.org/10.1038/s41593-022-01081-x Lee, J.-J., Lee, S., Lee, D. H., Woo, C. -W. (2022). Functional brain reconfiguration during sustained pain, <i>eLife</i> , 11:e74463. https://doi.org/10.7554/eLife.74463	
Presentations (Posters)	Lee, D. H., Lee, S., Woo, C. -W. (2022). The Landscape of Pain Prediction: A Sys-	

tematic Review and Benchmarking Analysis. *Society for Neuroscience Annual Meeting*, San Diego, CA, USA.

Skills

Languages: Korean (Native), English (OPIc IH / IELTS Academic Band 7.0), Japanese (Elementary)

Programming Languages: MATLAB, Python, R, Bash

Libraries: Tensorflow/Keras, PyTorch, SPM, FSL, Psychtoolbox

Software: Git, Docker, GCP(Google Cloud Platform), Slack, Discord, Notion

Experiments: 3T MRI Siemens Prisma (Operation and Safety Training at Center for Neuroscience Imaging Research), Medoc Pathway (Pain & Sensory Evaluation System)

Reference

Choong-Wan Woo, Ph.D.

Associate Professor

Department of Biomedical Engineering, Sungkyunkwan University

Center for Neuroscience Imaging Research, Institute for Basic Science

E-mail: waniwoo@skku.edu

Yukie Nagai, Ph.D.

Project Professor

International Research Center for Neurointelligence, The University of Tokyo

E-mail: nagai.yukie@mail.u-tokyo.ac.jp