Ikbeom Jang

ijang@hufs.ac.kr | https://labhai.github.io | https://github.com/jibikbam
Keywords: Machine Learning | Medical Imaging | Neurodegenerative Disease

Employment

Hankuk University of Foreign Studies — South Korea
Assistant Professor in Division of Computer Engineering — *Mar 2023 – Present*

Education/Training

Harvard Medical School & MGH — Boston, MA
Postdoctoral Research Fellow in Dept. of Radiology (*Martinos Center*) — *Sep 2019 – Feb 2023*

Purdue University — West Lafayette, IN
M.S. & Ph.D. in Electrical and Computer Engineering — *Aug 2013 – May 2019*

Yonsei University — Seoul, South Korea
B.S. in Electrical and Electronics Engineering — *Mar 2007 – Feb 2013*

Machine Learning Challenge

IEEE ISBI 2021: A-AFMA-Localization: Amniotic fluid measurement from ultrasound images **- 1st Place** — *Mar 19, 2021*
MICCAI 2019: ABCD Neurocognitive Prediction Challenge from T1w MRI **- 4th Place** — *Mar 24, 2019*

Service

Journal Reviewer: Medical Image Analysis, Neuroimage, Human Brain Mapping, Neuroimage: Clinical, Scientific Reports

Teaching

Courses: Deep Learning, Natural Language Processing, Digital Signal Processing Lab, Signals and Systems, Big Data Processing, Computational Thinking, Electric Circuits, SW Research Project
Institutions: Hankuk University of Foreign Studies, Purdue University, Harvard University

Industry

Wecover Platforms (AI startup, Cambridge, MA) **–** *Co-founder* — *Mar 2021 – Jun 2022*
NVIDIA (Holmdel, NJ) **–** *Intern* at *Autonomous Driving team* — *May 2018 – Aug 2018*
Earlens (Medical startup, Menlo Park, CA) **–** *Intern at Custom Products R&D team* — *Jun 2016 – Aug 2016*

Recent Publication (2021~)

- Jang et al., 2023. Brain structural indicators of β-amyloid neuropathology. *Neurobiology of Aging*. under review
- Xu & Jang et al., 2023. Cortical gray to white matter signal intensity ratio as a sign of neurodegeneration and cognition independent of β-amyloid in dementia. *Human Brain Mapping*. under review
- Eisenmann et al., 2023, Jun. Why is the winner the best? *CVPR*. p. 19955-19966.
- Ryu et al., 2023. Multi-planar 2.5D U-Net for image quality enhancement of dental cone-beam CT. *PLoS ONE*. 18(5), p. e0285608
- Jang et al., 2022. Multiscale structural mapping of Alzheimer's disease neurodegeneration. *Neuroimage: Clinical*, 33, p. 102948
- Choi et al. 2022. Reconfigurable heterogeneous integration using stackable chips with embedded artificial intelligence. *Nature Electronics*, pp.1-8.
- Patel et al. 2022, Jul. Opportunities and Challenges for Deep Learning in Brain Lesions. *International MICCAI Brainlesion Workshop* (pp. 25-36). Springer, Cham.
- Eisenmann et al. 2022. Biomedical image analysis competitions: The state of the current participation practice. *arXiv preprint* arXiv:2212.08568
- Jang et al., 2021, Dec. Decreasing Annotation Burden of Pairwise Comparisons with Human-in-the-Loop Sorting: Application in Medical Image Artifact Rating. *NeurIPS Data-Centric AI Workshop*. *Oral.*
- Zou & Jang, 2021, Dec. Engineering AI Tools for Systematic and Scalable Quality Assessment in Magnetic Resonance Imaging. *NeurIPS Data-Centric AI Workshop*. *Oral.*
- Ryu et al., 2021, Oct. K-space refinement in deep learning MR reconstruction via regularizing scan specific SPIRiT-based self consistency. *ICCV 2nd Learning for Computational Imaging Workshop*. *Oral.*
- Li et al., 2021. Identifying individuals at risk for Alzheimer's disease based on structural imaging in the Human Connectome Project Aging Cohort. *Human Brain Mapping*. 1-12.
- Li et al., 2021. Amyloid-Beta Influences Memory via Functional Connectivity During Memory Retrieval in Alzheimer's Disease. *Frontiers in Aging Neuroscience*, 13, p.557.
- Zou et al., 2021. Development of brain atlases for early-to-middle adolescent collision-sport athletes. *Scientific reports*, 11, 6440.
- Yao et al., 2021. A novel method of quantifying hemodynamic delays to improve hemodynamic response, and CVR estimates in CO2 challenge fMRI. *Journal of Cerebral Blood Flow & Metabolism*, p.0271678X20978582.