

Hyunkyung Han

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Seoul, South Korea

RESEARCH INTERESTS

Computer Vision, Medical Imaging, Generative Models, Image-to-Image Translation, Image Registration, Domain Adaptation, Weakly Supervised Semantic Segmentation

EDUCATION

- **Yonsei University** Mar 2025 - Present
M.S. in Artificial Intelligence Seoul, South Korea
 - Advisor: Seong Jae Hwang
- **Ewha Womans University** Mar 2021 - Feb 2025
B.S. in Computer Science and Engineering Seoul, South Korea

EXPERIENCE

- **NewcureM** Feb 2023 - Present
AI/SW Team Researcher Seoul, South Korea
 - Radiation Dose/Time Reduction Solution for Brain PET (FBB, FMM, 18F-FDG, 18F-FPCIT)
 - AI-guided Prostate Lesion Detection Solution for PSMA-1007 PET/CT and T2, ADC, DWI MRIs
 - Patient-specific Diagnosis Report Generation (Brain, Prostate)
 - K-FDA Approvals for Medical SW Devices

PUBLICATIONS

C=CONFERENCE, J=JOURNAL, P=PATENT, S=IN SUBMISSION, T=THESIS

- [C.1] S. Cho, **Hyunkyung Han**, S. Lee, M. Jung, Y. Oh, M. Yun. **Assessment of Tumor Response to Neoadjuvant Hormone Therapy in Prostate Cancer Using F-18 PSMA-1007 PET: A Feasibility Study**, *European Association of Nuclear Medicine (EANM)*, 2025
- [C.2] S. Seo, M. So, S. Lee, Y. Yoon, D. Seo, D. Kim, **Hyunkyung Han**, S. Kang, D. Kim, M. Yun. **Stratified Evaluation of Deep Learning Models by Age and Cognition Level for Amyloid Positivity Prediction in 18F-FDG PET**, *European Association of Nuclear Medicine (EANM)*, 2025
- [C.3] M. So, S. Seo, S. Lee, H. Lim, Y. Yoon, D. Kim, **Hyunkyung Han**, D. Seo, K. Choo, Y. Jun, S. Kang, D. Kim, Y. Lee, M. Yun. **Periventricular White Matter Hyperintensities and Brain Metabolism Contribute to Cognitive Dysfunction in Amyloid-Negative Patients**, *European Association of Nuclear Medicine (EANM)*, 2025
- [C.4] K. Choo, **Hyunkyung Han**, J. Kim, C. Yoon, S. J. Hwang. **Mono-Modalizing Extremely Heterogeneous Multi-Modal Medical Image Registration**, *Medical Image Computing and Computer Assisted Intervention (MICCAI)*, 2025
- [J.1] **Hyunkyung Han**, K. Choo, T. J. Jeon, S. Lee, S. Seo, D. Kim, S.J. Kim, S. H. Lee, M. Yun. **GAN-based Denoising for Scan Time Reduction and Motion Correction of 18F FP-CIT PET/CT: A Multicenter External Validation Study**, *Clinical Nuclear Medicine*, 2025 (Impact Factor = 10.0)
- [J.2] S. Seo, Y. J. Yoon, S. Lee, H. Lim, K. Choo, D. Kim, **Hyunkyung Han**, S. Kang, J. Park, P. H. Lee, D. Kim, M. Yun. **Striatal dopamine transporter uptake predicts neuronal hypometabolism and visuospatial function in Parkinson's disease**, *European Journal of Nuclear Medicine and Molecular Imaging (EJNMMI)*, 2025
- [C.5] **Hyunkyung Han**, S. Lee, K. Choo, D. Kim, H. Lim, D. Kim, S. B. Seo, Y. Yoon, M. Yun. **Denoising for 1/4 Count PET Scans with Dose and Scan Time Reduction**, *American College of Nuclear Medicine (ACNM), Annual Meeting*, 2025
- [C.6] **Hyunkyung Han**, K. Choo, S. Kang, H. Lim, M. Yun. **Scan-time Reduction of Brain 18F-FP-CIT PET using DCLGAN**, *Society of Nuclear Medicine and Molecular Imaging (SNMMI)*, 2024
- [C.7] D. Kim, S. Lee, D. Kim, K. Choo, H. Lim, **Hyunkyung Han**, J. Lee, M. Yun. **Deep-learning based multi-classification of FDG PET/CT images for the diagnosis of neurodegenerative diseases**, *European Association of Nuclear Medicine (EANM)*, 2024

SKILLS

Python, PyTorch, Python Libraries for Medical Image (Nibabel, MONAI, Scikit-Learn, etc.) Git, Docker, AWS, Linux DICOM protocol, PACS