

SEUNGEUN LEE

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<https://duneag2.github.io>

EDUCATION	New York University <i>Ph.D. Student in Computer Science</i> • Advisor: Prof. Julia Stoyanovich	New York, USA Sep 2025 - Present
	Korea University <i>M.S. in Mathematics (Applied Mathematics)</i> • Advisor: Prof. Seungsang Oh • GPA: 4.00/4.00 (Integrated B.S./M.S. Program)	Seoul, Korea Mar 2024 - Aug 2025
	Korea University <i>B.S. in Mathematics, B.E. in Computer Science and Engineering</i> • GPA: 3.76/4.00, Great Honor (Magna Cum Laude)	Seoul, Korea Mar 2020 - Feb 2024
PUBLICATIONS	1. S. Lee, S. Choi, T. Kang, S. Chung, S. Han, J. Seo, S. Oh, and I.-Y. Kwak, <i>iWAX: Interpretable Wav2vec-AASIST-XGBoost Framework for Voice Spoofing Detection</i> , Scientific Reports.	
	2. S. Chung, H. Kim, S. Lee, S. Lee, and S. Oh, <i>Honeycomb-lattice monomer-dimer mixtures</i> , Journal of Statistical Physics.	
	3. J. Kim*, S. Lee*, S.M. Ahn, G. Choi, B.-K. Je, B.J. Park, Y. Cho, and S. Oh, <i>Deep Learning Model Using Cross-sequence Learning to Identify Orbital Fractures in Radiographs of Patients Under 20 Years</i> , Frontiers in Bioengineering and Biotechnology. (*: equal contribution)	
PREPRINTS	4. S. Han*, J. Seo*, S. Choi, T. Kang, S. Chung, S. Lee, S. Park, S. Oh, and I.-Y. Kwak, <i>Enhancing voice spoofing detection in noisy environments using frequency feature masking augmentation</i> , Engineering Science and Technology, an International Journal. (*: equal contribution)	
	5. S. Lee*, N. Jeong*, J. Je*, and S.-Y. Lee, <i>BCCP: An MLOps Framework for Self-cleansing Real-Time Data Noise via Bayesian Cut-off-based Closest Pair Sampling</i> , IEEE International Conference on Artificial Intelligence x Data & Knowledge Engineering 2024. (*: equal contribution)	
	6. S. Choi, S. Chung, S. Lee, S. Han, T. Kang, J. Seo, I.-Y. Kwak, and S. Oh, <i>TB-ResNet: Bridging the gap from TDNN to ResNet in Speaker Verification with Temporal-Bottleneck Enhancement</i> , ICASSP 2024.	
PREPRINTS	7. S. Lee*, Y. Cho*, Y. Ji, M. Jeon, A. Kim, B.-J. Ham*, and Y.Y. Joo*, <i>Multimodal integration of neuroimaging and genetic data for the diagnosis of mood disorders based on computer vision models</i> , Journal of Psychiatric Research. (*: equal contribution)	
	8. S. Lee, S.H. Hwang, S. Oh, B.J. Park, and Y. Cho, <i>Multi-input Vision Transformer with Similarity Matching</i> , MICCAI PRIME Workshop 2023.	
	1. S. Lee, K. Lee, S. Bae, S. Lee, S. Lee, I.-Y. Kwak, and S. Oh, <i>Table2Image: A Lightweight Framework for Enhanced Tabular Data Classification with Image Transformation</i>	
PREPRINTS	2. S. Lee, G. Yang, and Y. Cho, <i>CurvUNet: Curvature-Informed UNet for Enhanced Medical Image Segmentation</i>	
	3. S. Lee, S. Chung, S. Lee, and S. Oh, <i>Counting perfect matchings in torus grid graphs</i>	

**RESEARCH
EXPERIENCE**

Center for Responsible AI, New York University	New York, USA
<i>Graduate Research Assistant</i>	Sep 2025 - Present
• Advisor: Prof. Julia Stoyanovich	
Department of Mathematics, Korea University	Seoul, Korea
<i>Graduate Research Assistant</i>	Apr 2023 - Aug 2025
• Advisor: Prof. Seungsang Oh	
• Designed interpretable tabular data classification and voice spoofing detection	
Department of Radiology, Korea University Anam Hospital	Seoul, Korea
<i>Undergraduate Research Intern</i>	Apr 2022 - Mar 2023
• Advisor: Prof. Yongwon Cho	
• Proposed interpretable models for pediatric imaging and geometry-aware segmentation	
Institute of Data Science, Korea University	Seoul, Korea
<i>Undergraduate Research Intern</i>	Nov 2021 - Mar 2022
• Advisor: Prof. Yoonjung Yoonie Joo and Prof. Yongwon Cho	
• Designed multimodal fusion models using medical imaging and genomic data for psychiatric disorder diagnosis	

**WORK
EXPERIENCE**

SCIEN	Ulsan, Korea
<i>Data Scientist & Engineer Intern</i>	Jul 2024 - Aug 2024
• Developed pill efficacy ML, DL models with Handok Pharmaceuticals	

**TEACHING
EXPERIENCE**

Department of Mathematics, Korea University	Seoul, Korea
<i>Teaching Assistant</i>	Mar 2024 - Aug 2025
• Topology I (MATH 333) & Deep Learning Math (MATH 391)	

Korea Human Resource Development Institute for Health & Welfare	Seoul, Korea
<i>Teaching Assistant</i>	Aug 2022 - Nov 2022
• Guided a medical AI project on CT-free orthopedic diagnosis using DRR and X-ray segmentation	
• Evaluated final competition entries	

**MENTORING
EXPERIENCE**

Seunghyun Lee	
<i>Co-supervised with Prof. Seungsang Oh</i>	Mar 2025 - Present
• Undergraduate student in Industrial Management Engineering and Mathematics at Korea University. Suppressive Dropout (ongoing research project).	

**TECHNICAL
SERVICES**

Photorage	Seoul, Korea
<i>Technical advisor</i>	Sep 2023
• Provided technical guidance on image generation and recommendation systems for a photo storage app at a startup	

- AWARDS AND HONORS**
- School of Engineering Fellowship, New York University (NYU) Sep 2025 - Aug 2026
 - Teaching & Research Assistant Scholarship, Korea University (KU) Mar 2024 - Aug 2025
 - Scholarship for Integrated B.S./M.S. Program Students, KU Mar 2024 - Aug 2025
 - Scholarship for Veritas Program (REU, College of Informatics, KU) Fall 2023
 - Scholarship for Veritas Program (REU, College of Science, KU) 2023
 - Samsung SDS Scholarship 2020 - 2023
 - Dean's List (College of Science, KU) Fall 2020
 - Semester High Honors, KU 2020 - 2023

LANGUAGES Korean (native), English (fluent), Spanish (intermediate), Chinese (intermediate)