

Jangho Seo

Seoul, Republic of Korea

wkdggh08721@gmail.com

Mobile: +82-10-2265-9844

github.com/jangho721 | linkedin.com/in/jangho-seo | jangho721.github.io

EDUCATION

Sep. 2020 ~ Aug. 2022	Hanyang University Department of Artificial Intelligence Thesis: NovoRank: Machine Learning Based Post-processing for Performance Improvement in De Novo Peptide Sequencing Advisor: Prof. Eunok Paek GPA: 4.16 / 4.5 <i>Master of Science in Artificial Intelligence</i>	Seoul, Korea
Apr. 2016 ~ Jan. 2018	Korean National Police Agency Security Unit, Government Complex Seoul <i>Auxiliary Police, Mandatory Military Service</i>	Seoul, Korea
Mar. 2014 ~ Feb. 2020	Inha University Department of Civil Engineering Double Major: Software Convergence Engineering (Samsung Convergence S/W Course) Coursework: Data Structures, Algorithms, Databases, Operating Systems, Computer Networks, Data Mining, Linear Algebra, Software Practicum GPA: 3.6 / 4.5 (Software Convergence Engineering: 4.18 / 4.5) <i>Bachelor of Science in Civil Engineering</i>	Incheon, Korea

PROFESSIONAL EXPERIENCES

DEIN <i>Data Scientist</i>	Aug. 2026 ~ Present Seoul, Korea
- Designed data schemas and KPI definitions for consumer-lending products at multiple Southeast Asian banks - Built an LLM agent that compiles natural-language specifications into executable data logic	
Ailys <i>Data Scientist</i>	Apr. 2025 ~ Jul. 2026 Seoul, Korea
- Expanded loan approvals by 4.6% at unchanged delinquency (+\$2.21M net interest margin) by correcting selection bias with Heckman two-stage reject inference - Optimized credit and underwriting models against loss ratio and net interest margin instead of classification accuracy - Reached 93% recall on insurance disease risk with a SageMaker training pipeline and cron-scheduled batch inference on Linux - Normalized an insurance data source into 6 relations and 12 KPIs as sliding-window batch jobs in Oracle SQL	

- Led a team of 5 building knowledge diagnosis and item recommendation for a digital textbook service
- Lifted enrollment conversion 5% and content completion 25% with a recommender over 2M+ users' learning histories
 - Modeling*: sequential models over enrollment histories combined with BERT-based content-title similarity
 - MLOps*: Airflow DAGs for feature processing, scheduled retraining and batch inference, and automated deployment, operated in production for three months
- Reached 0.88 AUC benchmarking four knowledge-tracing architectures (DKT, NPA, Last Query Transformer, SAKT)
- Co-authored the technical section of a KEIT proposal awarded KRW 3 billion

RESEARCH EXPERIENCES

Bioinformatics and Intelligent Systems Lab, Hanyang University

Aug. 2020 ~ Dec. 2022

Graduate Research Assistant

Seoul, Korea

- Built NovoRank, an open-source tool that re-ranks de novo peptide sequencing candidates
 - Clustering*: grouped candidate spectra with spectral clustering and DBSCAN
 - Scoring*: proposed C-Score, a new confidence measure defined over the clusters
 - Re-ranking*: trained a deep model to select the optimal candidate
- Improved precision and recall 4.5% on average across three de novo sequencing engines
- Presented at ASMS 2022, completed as master's thesis, published in Journal of Proteome Research (Q1)
- Refined peptide-spectrum-match scores with a semi-supervised model within the 1% FDR region

The Construction Systems Laboratory, Inha University

Jul. 2019 ~ Feb. 2020

Undergraduate Researcher

Incheon, Korea

- Built small-object detection models for indoor construction sites in a digital-twin safety project
- Defined the hazard taxonomy, annotated the image set, and designed augmentation for data scarcity
- Showed augmentation gains under on-device real-time constraints; presented at KICEM 2019

PUBLICATIONS

1. **J. Seo**, S. Choi, E. Paek, "NovoRank: Refinement for De Novo Peptide Sequencing Based on Spectral Clustering and Deep Learning", *Journal of Proteome Research*, 24(2), 903–910, (2025). DOI: [10.1021/acs.jproteome.4c00300](https://doi.org/10.1021/acs.jproteome.4c00300) [code: github.com/HanyangBISLab/NovoRank]

CONFERENCE PRESENTATIONS

1. **J. Seo**, S. Choi, E. Paek, "Post-Processing Framework Using Deep Learning to Improve De Novo Peptide Sequencing Results", American Society for Mass Spectrometry (ASMS) 2022, Minneapolis, MN, USA (2022) – Poster Presentation. (*preliminary version of the publication above*)
2. C. W. Jeon, **J. H. Seo**, et al., "Image Augmentation for Small Object Detection on Indoor Construction Site", Korea Institute of Construction Engineering and Management, Goyang, Korea (2019) – Oral Presentation

AWARDS AND SCHOLARSHIP

Super Rookie Award, Tmax A&C, sole company-wide recipient, awarded annually to one first-year employee	2024
Dean's List, Inha University, awarded for GPA above 4.0 / 4.5, both semesters of senior year	2019

PROFESSIONAL DEVELOPMENT

New-Hire Mentoring Program, TmaxEduAI

Mentor

Feb. 2024 ~ May 2024
Seongnam, Korea

- Guided a new hire through onboarding, team workflows, and the internal codebase

Google for Developers Machine Learning Bootcamp

Participant, Google Korea

Sep. 2023 ~ Nov. 2023
Online

- Selected as 1 of 500 for Google Korea’s three-month machine learning program
- Competed in Kaggle and joined mentoring sessions with engineers from ten partner companies

CERTIFICATES

Big Data Analytics Engineer, Korea Data Agency

Dec. 2021

Engineer Information Processing, Human Resources Development Service of Korea

Nov. 2019

TECHNICAL SKILLS

Advanced

Python, PyTorch/TensorFlow/Scikit-learn, SQL

Moderate

Polars, Airflow, MLflow, AWS SageMaker, FastAPI/Django REST Framework

Novice

Java, Docker

LANGUAGE PROFICIENCY

Native in **Korean** and Intermediate-Level in **English**

RESEARCH INTERESTS

Machine Learning Systems and Infrastructure, Recommendation and Knowledge Tracing Models, Decision Systems under Selection Bias