

JUNGGEUN DO

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EDUCATION

Texas A&M University, College Station, Texas

(anticipated) May 2027

MS in Computer Science

- Coursework: Deep Learning, Human-Computer Interaction, Trustworthy NLP

Seoul National University, Seoul, South Korea

Aug 2024

BS in Physics; BA in Economics; Minor in Computer Science and Engineering

- Relevant Coursework: Deep Learning, Natural Language Processing, Computer Vision, Data Structures, Statistics, Computer Architecture, System Programming

PUBLICATION

[1] SEAL-Pose: Enhancing 3D Human Pose Estimation through Trainable Loss Function

Junggeun Do, Jay-Yoon Lee

ICCV 2025 workshop on Structural Priors for Vision (SP4V)

[2] ContrastiveMix: Overcoming Code-Mixing Dilemma in Cross-Lingual Transfer for Information Retrieval

Junggeun Do, Jaeseong Lee and Seung-won Hwang

NAACL 2024 (oral)

RESEARCH EXPERIENCE

Structure & Knowledge Injection into Machine Learning Lab, Seoul National University

Feb 2024 – Jan 2025

Research Intern (advisor: Jay-Yoon Lee)

- Published research on methods to integrate structured energy networks as trainable loss functions, enabling deep learning models to learn complex structures in output space

Language & Data Intelligence Lab, Seoul National University

Apr 2023 – Feb 2024

Research Intern (advisor: Seung-won Hwang)

- Published research on zero-shot information retrieval in low-resource languages using multilingual pre-trained language models and code-mixing.
- Explored to improve retrieval-based language models for robust open-domain question answering for ambiguous queries

WORK EXPERIENCE

Z.ai Inc., Seoul, South Korea

Jan 2025 – Jul 2025

Machine Learning Engineer

- Engineered low-latency dense-sparse hybrid retrieval system (AWS OpenSearch, EKS) for e-commerce company, scaling to 10M+ items with <1s response time
- Developed LLM-powered writing assistant (OpenAI, LangChain) with prompt engineering and a basic form of RAG, enabling marketing teams to generate targeted promotional copy and improving their productivity

Gravity Labs Co., Ltd., Seoul, South Korea

Sep 2022 – Mar 2023

Software Engineer; founding member

- Developed mobile apps with physical activity tracking (location, accelerometer, gyroscope) and personalized ad delivery via Google Ads API, reaching 100K+ MAU (React Native, TypeScript)
- Engineered real-time data pipelines and transaction management, ensuring atomic and consistent database operations (Node.js, MongoDB, AWS Lambda)

VoyagerX, Inc., Seoul, South Korea

Mar 2022 – Aug 2022

Machine Learning Engineer

- Designed optimized deep learning models for text-to-speech synthesis, reducing required training data by 33% while preserving output quality
- Developed GAN-based image generation models and pipelines for a photorealistic hairstyle transfer system

Sep 2021 – Feb 2022

- Enhanced chat domain-specific machine translation for KakaoTalk (50M+ users) using data augmentation and domain adaptation, increasing BLEU scores while reducing repetition errors

Data Structure (M1522.000900), Seoul National University Mar 2024 – Jun 2024

- Taught data structure with examples and answered questions from 120 students

Foundation of Physics 1 (034.005), Seoul National University Mar 2024 – Jun 2024

- Tutored four undergraduate students with no background in physics

President's Award for Student Leadership Aug 2024

- Awarded to three of 2822 graduates who have significantly contributed to the development of the university and the local community

Presidential Science Scholarship	Mar 2015 – Feb 2020
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- Awarded merit-based scholarship covering full tuition and providing living expenses support, granted to only 120 science and technology majors nationwide

Samsung HumanTech Paper Award Feb 2014

- Received the Bronze award in 'Physics/Earth Sciences' sector for the paper entitled "Method to increase efficiency of wireless transfer system based on magnetic resonance: single and multiple receivers."

Winter School of the Korean Physics Olympiad Jan 2014

- Selected as one of 50 national team candidates for the International Physics Olympiad (IPhO)

Military Service, Republic of Korea Army Feb 2020 – Sep 2021

- Commanded 10 soldiers as squad leader and worked as military driver
- Assisted two-star general officer in two ROK/US Combined Command Post Training exercises

Undergraduate Student Government, Seoul National University Dec 2018 – Nov 2019

- Worked as the president directly elected by all 20,000 undergraduate students
- Chaired 20-member executive committee and led 100-member executive body
- Formerly worked as the president of College of Natural Sciences Student Government in 2017
- Formerly worked as a member of executive body and Human Rights Committee in 2016

- **Programming:** Python, TypeScript, JavaScript
- **ML/Data:** PyTorch, Scikit-learn, NumPy, Pandas, Polars, SQL, MongoDB
- **Frameworks:** Flask, FastAPI, React, Node.js
- **Infrastructure:** Git, Linux, Docker, AWS (EC2, ECR, EKS, Lambda, S3)