

Gyuseok Lee

AI Research Scientist

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GitHub Profile

LinkedIn Profile

RESEARCH INTERESTS

Recommender System, Continual Learning, Knowledge Distillation, Diffusion Models, LLMs, Medical AI

EDUCATION

• M.S., Graduate School of Artificial Intelligence, POSTECH

Feb 2022 - Feb 2024

Overall GPA: 3.77 / 4.30

Advisor: Hwanjo Yu

Thesis: Collaborative Knowledge Distillation for Continual Learning in Recommender System

• B.S., Computer Science, Mathematics & Statistics, Handong Global University (HGU)

Feb 2015 - Feb 2022

Overall GPA: 4.01 / 4.50, Major GPA: 4.22 / 4.50 (Magna Cum laude)

Advisor: InJung Kim, Heonjoo Kim

RESEARCH EXPERIENCE

• Researcher, POSTECH

March 2024 - Present

Research Area: Diffusion Models, Continual Learning, LLM, Recommender System

Pohang, South Korea

• Visiting Researcher, University of Virginia (UVA)

Sep 2023 - Feb 2024

Topic: Diffusion Recommender Model

Charlottesville, VA

Advisor: Jundong Li

• Visiting Researcher, Carnegie Mellon University (CMU)

Aug 2022 - Feb 2023

Coursework: Deep Learning, Game Theory, NLP, Large-Scale Multimedia Analysis

Pittsburgh, PA

Sponsored by the Government of the Republic of Korea

• Graduate Research Assistant, POSTECH

Feb 2022 - Present

Topic 1: Collaborative Knowledge Distillation for Continual Learning on Recommender System

Pohang, South Korea

Topic 2: Calibrating Deep Learning Model for Medical AI Applications with Imbalanced Data

• Medical AI Research Intern, AITRICS

Dec 2021 - Feb 2022

Topic 1: Two-Stage Process with CNN and XGBoost for Thyroid Cancer Prediction

Seoul, South Korea

Topic 2: Self-supervision for Classification of Pathology Images with Limited Annotations

• Undergraduate Research Intern, HGU

Feb 2021 - Dec 2021

Topic: Development of Deep Neural Network Partial Learning Algorithm for On-Device Learning

Pohang, South Korea

Advisor: InJung Kim

PUBLICATIONS

1. **Gyuseok Lee***, SeongKu Kang*, Wonbin Kweon, Hwanjo Yu, "Continual Collaborative Distillation for Recommender System", ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), 2024,
2. **Gyuseok Lee**, Hwanjo Yu, "Calibrating Deep Learning Model for Medical AI Applications with Imbalanced Data", The Korean Institute of Communications and Information Sciences (KICS), 2023

PROJECTS

• Collaborative Diffusion Model for Recommender System

Sep 2023 - Present

Recommender System, UVA

• Continual Collaborative Distillation for Recommender System

Mar 2023 - Feb 2024

Recommender System, POSTECH

• Effective Visual Clustering for Personalized Multimodal Fashion Recommendation

Sep 2022 - Dec 2022

Recommender System, CMU

• MLM is All you need (QA/QG)

Sep 2022 - Dec 2022

NLP, CMU

- **Automatic Paper Assessment** *Sep 2022 - Dec 2022*
NLP, CMU
- **Multi-Agent Reinforcement Learning for Taxi Repositioning with Attention Network** *Sep 2022 - Dec 2022*
Reinforcement Learning, CMU
- **Calibrating Deep Learning Model for Medical AI Applications with Imbalanced Data** *Jun 2022 - Aug 2022*
Computer Vision & Medical AI, POSTECH
- **Self-Supervision for Classification of Pathology Images with Limited Annotations** *Dec 2021 - Feb 2022*
Computer Vision & Medical AI, AITRICS
- **Two-Stage Process with CNN and XGBoost for Thyroid Cancer Prediction** *Dec 2021 - Feb 2022*
Computer Vision & Medical AI, AITRICS
- **Developing DNN Partial Learning Algorithm for On-Device Learning** *Feb 2021 - Dec 2021*
Computer Vision, HGU

TEACHING ASSISTANCE EXPERIENCE

- **Object Oriented Programming** *Feb 2023 - Jun 2023*
C++, POSTECH
- **Big Data Analysis using R Programming** *Sep 2021 - Dec 2021*
R programming, HGU
- **Mathematical Statistics** *July 2021*
Statistics, HGU
- **Statistical Methodology** *Mar 2021 - Jun 2021*
Statistics, HGU
- **Python Programming** *Sep 2020 - Dec 2020*
Python, K-MOOC
- **Python Programming** *Mar 2020 - Dec 2020*
Python, HGU

HONORS

- **Foundation Scholarship, GyeongWon Scholarship Foundation, Korea** *Nov 2021*
- **Foundation Scholarship, GyeongWon Scholarship Foundation, Korea** *Mar 2021*
- **Academic Excellence Scholarship, HGU, Korea** *Mar 2021*
- **Academic Excellence Scholarship, HGU, Korea** *Sep 2020*
- **Academic Excellence Scholarship, HGU, Korea** *Mar 2020*

SKILLS

Python, PyTorch, TensorFlow, Linux, R programming, C++, C