Curriculum Vitae

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Sieun Park

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Education

Seoul National University

Bachelor's degree in **Mathematics Education, Interdisciplinary major in AI**

:

2018.03-2024.02

- Overall GPA: **3.88** / 4.30
- Major GPA: **4.03** / 4.30
- Inter. Major GPA: **3.7** / 4.30

Main Courseworks:

Math & Statistics

- Mathematical Statistics
- Linear regression and Lab
- Topology 1
- Analysis
  - Analysis 1&2
  - Complex Analysis, Real Analysis
  - Numeric Analysis
- Algebra
  - Linear Algebra
  - Abstract Algebra
- Discrete Mathematics

Computer Science

- Programming Methodology
- Data Structure
- Algorithm
- Database

AI Core

- Artificial Intelligence
- Computer Vision
- Introduction to Deep Learning
- Mathematical Foundations of Deep Neural Networks
- Computer Linguistics
- Deep Learning (for graduate students)

X+AI

- AI and Law
- Curriculum-Software Convergence Project

Hansung Science High School

: 2016.03-2018.02

- graduated as a **valedictorian**
- Mathematics theory research about
  - 3D Extension of Pick's theorem
  - SNS analysis in discrete mathematics

Research Interest

My research interest lies at the union of **Human-AI Interaction** and **Human-Centered AI System Design**, where I aim to develop systems that cater to human needs while contributing positively to society.

I am also interested in creating AI architectures and training methodologies inspired by human cognition and behavior, such as Knowledge Distillation. Utilizing studies in Human-AI Interaction (HAI) as a foundation, especially concerning special groups, would offer valuable insights into understanding human behavior in the ideation process.

In this pursuit, I prioritize making my work mathematically explainable.

Ultimately, my goal is to foster technology that not only effectively serves human needs but also enhances societal well-being through responsible and accountable AI innovation.

Keywords:

- **Human-centered AI system**
- **HAI (Human-AI Interaction)**
- **Mathematical Modeling & Improvement in AI**

Experiences

Research Internship

- at **DRL**(Deep Representation Learning lab) : Jan 2021-Feb 2021
  - Research about Deep Learning Healthcare (Topic: classification of ECG to detect arrhythmia)
  - Advisor: Wonjong Rhee
- at **HCS**(Human-centered Computer Systems lab): Sep 2023-Now
  - Research in Technical HCI field (Topic: AI-embedded app design for preschooler’s language learning)
  - Advisor: Youngki Lee

Research Experience

- Participated in Long-Term Project in Development of AI-integrated Curriculums, hosted by SNU AIED (Apr 2023~Dec 2023)
  - Developed a lesson plan integrating an image classification model & XAI concepts to a math class (demo in GitHub)
  - Submitted *Proceeding paper* in 대한수학교육학회, presented the topic in KSESM (Dec 2023)

Project

- Participated in AIED-CON 2021: 3rd prize (Dec 2021)
- Participated in AIED-CON 2022: 2nd prize (Jan 2023)
- *DWNC*: starting member, developed a home page for DWNC (Promoting team director, Main developer)
- Participated in “*math teaching scenario dataset construction project*”, hosted by ***Tutorous*** & Professor Yun Joo Yu (Jul 2023-Aug 2023)
  - Mainly worked in an education expert group

Teaching Assistant

- AIED programming lecture(M3450.000600) TA in 2023 Spring

- AIED programming lecture(M3450.000600) TA in 2023 Fall

Awards & Scholarships

- Graduated Magna Cum Laude
- AIED-CON 2022 2nd prize: Jan 2023
- AIED-CON 2021 3rd prize : Dec 2021
- National Science & Technology Scholarship : Mar 2018-Feb 2023

Additional information

- Language: Korean (native), English (New TEPS 414)
- Skills:
  - proficient in Python, PyTorch
  - competent in C++, SQL, design tools
  - novis at Tensorflow, Flutter, React Native

- Other characteristics
  - comfortable with pure theory books, thanks to my math major
  - good at writing what I learned as an article