Minjae LEE

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Skills

- Deep Learning : Can use various of model architectures depending on data characteristics and modify existing model to fit better into target data.
- Data Analysis : Good at extracting insight or finding remarkable signal from immense data. Trained analytic skills while dealing with human behavior, physical, financial, and many more types of data.
- Adaptability : Can break down new technologies and changes, then utilize essential things from them to achieve specific goal in top-down manner in fast-changing world.
- Coding : Can use C, C++, JAVA and especially python. Mostly used pytorch when conducting AI research & projects.

Education

Seoul National University, Seoul, Republic of Korea
• Major in Computer Science and Engineering – GPA : 4.11/4.30 Mar 2019 ~ Present
Georgia Institute of Technology, Atlanta, United States of America
• Exchange Student, Computer Science – GPA : 4.00/4.00 Jan 2022 ~ Jun 2022

Experience

• Artificial Intelligence Institute of Seoul National University – Research Intern (2021 Jun~Sep)
: Constructed an AI model that can model e-commerce shopper and predict their behavior
• Georgia Institute of Technology
(ML subteam of RC-VIP team) – Undergraduate Student Researcher (2022 Jan~May)
: Constructed an AI model that can predict a vehicle's future trajectory (learning dynamics)
Significantly increased the lab's prediction accuracy
• Turing – ML Researcher & Engineer (2022 Jul ~ 2024 Aug)
: Constructed an AI model that can calculate students' ability and predict their behavior
Made the model controllable using existing knowledge, to exploit domain experts' knowledge to deal with various situations
Built the model which not only achieves high accuracy, but also shows behavior which aligns with human instinct
Devised an LLM utilization idea which enables flip learning in math education and pipeline to implement it. OpenAI selected Turing as a partner company based on this idea.
Fully brought out LLM's mathematical abilities by making it utilize experts' knowledge to the fullest extent. And, applied it to company's product.
• SNU Machine Perception and Reasoning Lab – Research Intern (2024 Sep ~)
• Participated in research on robotic grasping affordance detection : proposed and implemented a novel methodology to infer safe grasping regions of an object in zero-shot manner using LLM and image generation model, and visually segment them on an image.
• Developing an automated question generation system based on task progress tracking system : Designing and developing an automated system that quantifies the current state of a specific task into an interpretable metric and, based on this, infers the content and timing of the most effective question for agent to ask for task execution.

Honors & Scholarships

• National Science & Technology Scholarship – 10,000 USD
• Mirae Asset Global Exchange Student Scholarship – 6,000 USD
• Other Merit-Based Scholarships from the University – 3,000 USD

Publications

• [J01] Kwangho Lee, Youngdo Kim*, Youngsi Kim*, Juho Kim*, **Minjae Lee***, Joonho Kong. (2018). Approximate processing hardware design and implementation of exponential function presented with Taylor series for embedded systems. Proceedings of Symposium of the Korean Institute of communications and Information Sciences, 2018.6, 38-39(2 pages).

• [C01] Kim, Hyeondey*, Jinwoo Nam*, **Minjae Lee***, Yun Jegal and Kyungwoo Song. "Leveraging Skill-to-Skill Supervision for Knowledge Tracing." AAAI2023 (AI4ED) (2023)

* indicates these authors contributed to the paper equally

• [C02] Sungyeon Park, **Minjae Lee**, Jihyuk Kang, Hahyeon Choi, Yoonah Park, Juhwan Cho, Adam Lee and Dongkyu Kim. "VLAAD: Vision and Language Assistant for Autonomous Driving." WACV2024 (LLVM-AD) (2024) – (42 citations as of July 2025)

Patents

• "Method, Program, and Device for Quantifying Correlation Between Units", Minjae Lee, Jinwoo Nam, Korean Patent 10-2023-0075514 (2023)

Projects

• Diagnosis and prescription of disease using KNN algorithm (2016)
• Slow light Quantum memory (2017)
• Virtual Clothes Try-on Using Classic Computer Vision Techniques and Deep Learning Techniques (2021)
• Big Data Analysis in e-Commerce Using Artificial Neural Network (2021)
• Predicting whether kickstart event success or not (2022)
• Implementing adapter module in Vision Transformer model to improve tuning (2022)
• Trained language model to be able to understand and exploit visual data (2023)

Other Activities

• Member of Informatica (High School Information Science Club) – 2016~2018
• Member of Daegu Science High School for the Gifted Code Jam Steering Committee – 2017
• Participated in 2021 SNU Graduate School of Data Science Boot Camp (Computer System for Data Science & First Step to Big Data and Knowledge Management)
• Took CS231n, Full Stack Deep Learning course(Both include discussions with teammates) online. And ML, DL, NLP, ML for Trading courses in Georgia Tech
• Participated in AI TECH PLAY program as one of mentor team leader. Teached students about classic AI algorithms in autonomous vehicle.
• Participated in AttentionX, deep learning research and product development club, and researched about language models in autonomous driving.