DONGKYU CHO

Machine Learning Researcher at LG AI Research, Seoul, South Korea

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EDUCATION

Seoul National University *Seoul, South Korea*

Master of Science in Data Science, advised by Prof. Sanghack Lee *March 2021 – August 2023*

• Coursework: Machine Learning and Deep Learning for Data Science, Big Data and Knowledge Management Systems, Software Platforms for Data Science, Machine Learning for Visual Understanding, Text Analytics and Big Data, Causal Inference for Data Science, Special Topics in Data Science: Meta Learning, Data Science Capstone Project, Dissertation Research, Special Lecture on Data Science

Seoul National University *Seoul, South Korea*

Bachelor of Arts in Western History | Information Science and Culture (Interdisciplinary Major) *March 2014 – February 2021*

• Computational Linguistics for Historical Analysis
• Graduated with Distinction (Cum Laude)

RESEARCH EXPERIENCE

LG AI Research, Data Intelligence Lab *Seoul, South Korea*

Research Scientist Intern *July. 2023 –*

• *Research Area*: Time Series Foundation Models, Transfer Learning, Large Language Models
• Application of Large Language Models for Time-Series Forecasting Projects
• Transfer Learning via loss landscape shifting.
• Instruction Tuning for Causal Reasoning.

Seoul National University *Seoul, South Korea*

***Graduate Research Assistant**, advised by Prof. Sanghack Lee* *2021 – 2023*

• *Research Area*: Causality, Causal Representation Learning, Out-of-Distribution Generalization
• *Research*: Leveraging causality for effective Out-of-Distribution Generalization.
• *Industry*: Developed and deployed machine learning and deep learning models for 2 companies (NH Investments & LG AI Research).

DaumSoft *Seoul, South Korea*

Data Analyst Intern *Jan. 2019 – Feb. 2019*

• *Research Area*: NLP-based Market Sentiment Analysis

TEACHING EXPERIENCE

Deep Learning and Machine Learning II, Teaching Assistant *Fall 2022*

• Assisted Master's and Ph.D. students with the course on modern statistical learning methods (e.g., Bayesian Frameworks).

Data Science Bootcamp, Teaching Assistant *Winter 2021*

• Assisted Undergraduate students with the introduction to machine learning.
• Assignment design, Lab courses on machine learning libraries (e.g., Pytorch)

SELECTED PUBLICATIONS *: co-first author

1 A+ conference workshops — 2 preprints — 1 co-authored

Cho, D., Lee, S. (2023). Learning to ignore: Single Source Domain Generalization via Oracle Regularization, Accepted at *NeurIPS 2023, Causal Representation Learning Workshop*

Cho, D., Yang, J., Cho, H., Lim, W. (2024). ShERPA: Shifting basin for Enhanced Robustness via Permuted Activations, To be submitted to *ICML 2024*

Bae, S., Seo, J., **Cho, D**, Yang, J., Choe, H., Park, S., Ahn, W., Kim, M., Kang, D., Cho, H., Lim, W. (2024). Flow Matching in Deep Weight Space for Learning to Generate Implicit Fields, Under Review at *CVPR 2023*

PROFESSIONAL EXPERIENCE

LG AI Research, Data Intelligence Lab *Seoul, South Korea*

Research Scientist Intern *July. 2023 –*

• Worked as a research intern at LG AI Research.

Seoul National University, Causality Lab *Seoul, South Korea*
***Graduate Research Assistant**, advised by Prof. Sanghack Lee* *2021 – 2023*
- Worked as a research assistant at Causality Lab, Seoul National University.

DaumSoft *Seoul, South Korea*
Data Analyst Intern *Jan. 2019 – Feb. 2019*
- Worked as a data analyst intern at DaumSoft (now known as VAIV company).

Republic of Korea Army *Icheon, South Korea*
Military Interpreter (English-Korean) *Mar. 2016 – Dec. 2017*
- Served as military interpreter at the Republic of Korea Army.

PROJECTS

Stock Interrelation Research using Keyword and Supply Chain data *Seoul National University and NH Investment & Securities*
Collaborative Research *July 2021 – August 2022*
- *Research Area*: Natural Language Processing, Continual Learning, Financial Language Models
- A continual-learning based pipeline for a Financial Language Model
- Interactive Graph Database using the Bloomberg Supply Chain Data & Financial Corpus
- Launched as an app-feature in the trading app of NH Investment & Securities

Towards Language Models Capable of Causal Reasoning *Seoul National University and LG AI research*
Collaborative Research *August 2022 – July 2023*
- *Research Area*: Natural Language Processing, Causality
- A Causal NLP Project, aborted during process to join LG AI Research.

Class Projects *Seoul National University*
- Class Project for *Special Topics in Data Science- Meta Learning*: "Semi-Supervised Federated Learning with Representations"
- Class Project for *Machine Learning for Visual Understanding*: "A combination approach for wikipedia Image/Caption Matching"

SKILLS AND ACTIVITIES

- **Programming**: Python (PyTorch, TensorFlow, scikit-learn), R, SQL, MLOps Tools (e.g., Docker, WandB, GCA, AWS)
- **Languages**: English, Korean, French (Intermediate)
- **Test Scores**: TOEFL: 118 (2020.08), 116 (2022.08)