# DongGeon Lee

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#### Research Interests

Natural language processing, Large language models (LLMs), Data-centric AI

#### **EDUCATION**

### M.S. student in Artificial Intelligence

February 2024 - February 2026

Pohang University of Science and Technology (POSTECH)

Pohang, South Korea

• Advisor: Prof. Hwanjo Yu

# B.S. in Information and Communication Engineering Inha University

March 2018 - February 2024

Incheon, South Korea

- Relevant Courseworks: AI Applications, Signal and Systems, Database Capstone Design Algorithm Capstone Design, Data Structure, Digital Image Processing, Numerical Analysis
- Received Scholarships: Research scholarship for undergraduate researchers, Scholarships for campus extracurricular activities

#### RESEARCH EXPERIENCES

#### Visiting Researcher

HyperEZ Inc.

January 2024 - January 2024 Seongnam-si, South Korea

## Research Assistant

Data Intelligence Laboratory, Inha University

November 2022 - November 2023

Incheon, South Korea

• Advisor: Prof. Wonik Choi

#### Research Assistant

Nursing Informatics Laboratory, Inha University

August 2021 - June 2023 Incheon, South Korea

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• Advisor: Prof. Insook Cho

#### Conferences

- [1] Insook Cho, Eun-Ju Lee, and **DongGeon Lee**. Effects of Language Differences on Inpatient Fall Detection Using Deep Learning. *MedInfo 2023: The 19th World Congress on Medical and Health Informatics*, Sydney, Australia, July 2023. (Poster)
- [2] **DongGeon Lee**, EunJu Lee, and Insook Cho. Bridging the Reporting Gap of Inpatient Falls to Improve Safety Practices Using Deep-Learning-Based Language Models and Multisite Data. *AMIA 2023 Clinical Informatics Conference*, Chicago, United States, May 2023. (Peer Reviewed, Oral Presentation)
- [3] Changhun Koo\*, Yoonjoo Jung\*, and **DongGeon Lee\***. Through deep learning-based video processing, Design and implementation of Smart Port Parking Information System. In *Proceedings of the Annual Conference of KIPS 2021*, Yeosu, South Korea, November 2021. (Oral Presentation, \*: Co-First Author)

#### **PROJECTS**

Big Data Technology for Aviation Safety Management March 2023 - November 2023

Data Intelligence Laboratory, Inha University Incheon, South Korea

• Development of a domain-specific language model for identification of causal factors in aviation safety reports

#### Contribution to Hugging Face Transformers Library

November 2023

Open-source Contribution

Online

• Improve PyTorch usage examples in Hugging Face Transformers for better readability

#### FallSafe: Reducing Falls with Clinical Data

January 2022 - June 2023

Nursing Informatics Laboratory, Inha University

Incheon, South Korea

- Development of fall report detection models using BERT-based models
- Development of named entity recognition models for the automatic generation of case reports
- Network analysis for drug prescribing patterns

# Intelligent Clinical Guidance System Development

August 2021 - December 2021

Nursing Informatics Laboratory, Inha University

• Topic-modeling for insightful medical data analysis

#### Smart Port Traffic Control System

April 2021 - November 2021

ICT Mentoring, The Federation of Korean Information Industries

Seoul, South Korea

Incheon, South Korea

- Development of a deep learning-based system for real-time detection of parking conditions
- Development of a real-time parking lane recognition algorithm through image processing

#### PATENT

[1] System for providing parking information and control method. *KR-Application No.* 10-2021-0178090, South Korea, December 2021.

#### CERTIFICATIONS

- [1] Algorithms 1, 2. POSTECH STAR-MOOC, September 2023 October 2023.
- [2] **Deep Learning Course (Advanced)**. Inha Innovation Sharing University for Future Vehicle Technology, January 2023.
- [3] Building Transformer-Based Natural Language Processing Applications. NVIDIA Deep Learning Institute, August 2022.
- [4] Fundamentals of Deep Learning. NVIDIA Deep Learning Institute, August 2022.
- [5] Amazon Web Services (AWS) Machine Learning Course. Inha Innovation Sharing University for Future Vehicle Technology, February 2022.
- [6] Understanding Deep Learning. Hancom Academy, February 2022.

#### TEACHING EXPERIENCES

#### Teaching Assistant

March 2023 - December 2023

Dept. of Information and Communication Engineering, Inha University

Incheon, South Korea

- ICE2004: Data Structure (Fall 2023)
- ICE4016: Database Capstone Design (Fall 2023)
- ICE1005: Introduction to AI Programming (Spring 2023)
- ICE3020: Algorithm Capstone Design (Spring 2023)

# Computer Programming Instructor (Contract)

October 2021 - May 2023

Seoul, South Korea

- $Jamcoding,\ Co.,\ LTD$ 
  - Data Analysis and Visualization
  - $\bullet$  Programming and Algorithms Python & C

#### TECHNICAL SKILLS

- Programming Languages: Python, C++, C, JavaScript, Shell Script
- Frameworks and Libraries: PyTorch, Keras, TensorFlow, Hugging Face, OpenCV
- Systems and Tools: Git, Linux, MySQL, AWS, Arduino, LATEX

#### LANGUAGE SKILLS

#### English

- Obtained an IH (Intermediate High) OPIc grade; proficient communication on diverse subjects, in August 2023
- Obtained a **805 TOEIC score**; advanced working proficiency, in February 2023