# Dongsuk Jang

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#### EDUCATION

#### Seoul National University

Seoul, Korea

M.S. Interdisciplinary Program in Bioengineering

Mar 2023 - Feb 2025(Expected)

Research Interests: Natural Language Processing, Multimodal AI, Medical AI

# Sungkyunkwan University

Suwon, Korea Mar 2015 - Feb 2023

B.S. Integrative Biotechnology

Micro Degree Core-Bio A-School Track

## Haeundae Highschool

Busan, Korea

Established CBC(Chemical Biology Club), 3 years in Mathematical Essay Club

Mar 2012 - Feb 2015

#### **PUBLICATIONS**

• Dongsuk Jang<sup>†</sup>, Hyeryun Park<sup>†</sup>, Jiye Son, Hyeonuk Hwang, Su-jin Kim, Jinwook Choi: "Automated Information Extraction from Thyroid Operation Narrative: A Comparative Study of GPT-4 and fine-tuned KoELECTRA" In: American Medical Informatics Association (AMIA), Informatics Summit. 2024.

#### Projects

- Table to Text Generation task research (Dec 2023 Present): Table to Text generation research comparing Seq2Seq models with Hierarchical Encoder and diverse LLM finetuning methods(PEFT) such as QLoRA, etc.
- Natural Language Search System on Clinical Data Warehouse (Feb 2024 Present): Development of a search system that answers doctor's natural language questions about patient info. Converting medical natural language questions into best sql queries.
- Automatic Generation of Thyroid Operation Records on Web(Mar 2023 Feb 2024): Development of a web-based system (voice recognition using CLOVA Note, extraction of clinical info with KoELECTRA, normalization of extracted results, image generation) and comparison with GPT-4 few-shot setting.
- CNN Image Classification Project(Mar 2023 May 2023): Building basic CNN Image classification model that classifies sports balls vs human faces.
- Word2Vec from Scratch(May 2023 Aug 2023): Study the principle of word2vec and build up from scratch. Train the own model with the book 'Alice in Wonderland' and compare performance with original word2vec library.
- Winter Internship Project(Dec 2022 Feb 2023): Compare the performace of various models(m-LSTM as baseline, BERT based models such as BioELECTRA, DeBERTa, PubMedBERT, RoBERTa etc.) MedNLI Task with MIMIC-III Dataset and find out the best parameter settings.

#### EXPERIENCE

• Student Intern, Samsung Advanced Institute for Health Sciences and Technology:

Mar 2021 - Dec 2022

- About: I started studying computer science subjects for the first time, realizing that much research in biology and
  medicine is also happening through the use of computers, which sparked a great curiosity and had the biggest influence
  on my current career choice.
- o Supervisor: Seonguk Seo(03/2021-05/2022), Wonchul Cha(06/2022-12/2022)
- Research Intern, Liflex Science Inc.:

Jun 2022 - Aug 2022

- **About**: With a great interest in entrepreneurship and business, worked as an intern at a startup company, learning about the overall practical aspects of a startup, especially in investment acquisition and R&D. Realized that more important than novel ideas is to concretize them and develop them into a business.
- o Supervisor: Jinhong Kim, Dongsoon Ahn
- Military Service, Korean Augmentation to the United States Army, USAG-Daegu:

Jan 2018 - Sep 2019

- About: Worked alongside the Korean and American military, understanding and coordinating the differences between
  each military and culture. Additionally, learned how to live a proactive life based on strong physical fitness and a
  regulated lifestyle.
- o Role: Human Resources Specialist(42A) & Senior KATUSA

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#### Honors and Awards

- Next Generation BioHealth Leader Award at Sungkyunkwan University Feb, 2023
- Best Intern Award at Samsung Advanced Institute for Health Sciences and Technology August, 2021
- Commandants list at KATUSA training academy April, 2018

## TEACHING ASSISTANT

# • Computer Assisted Medical Data Processing in the Department of Medicine Python Basics, Data Analysis and Machine Learning(breast cancer dataset) Selective Course for undergraduate students in the Department of Medicine 2023

# Python Basics, Data Analysis using pandas(breast cancer dataset), ANN classification(breast cancer dataset)

#### Professional Services

• Reviewer for the AMIA 2024 Annual Symposium

## SKILLS SUMMARY

Languages: Python, R, MatlabFrameworks: Pytorch, TensorFlow

• Tools: Git, Docker

• Platforms: Linux(Ubuntu), Windows

• Soft Skills: Leadership, Writing, Time Management

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