Ganghui Yi

🏠 hughyi.github.io

RESEARCH INTERESTS

AI for Healthcare, Applied Machine Learning, Bioinformatics

EDUCATION

Sogang University   Mar 2017 - Feb 2024
Bachelor of Science in Engineering, Computer Science and Engineering   Seoul, Korea
Bachelor of Science, Life Science (Double Major)
Honors: ***Magna Cum Laude***
Major GPA: 3.87/4.3 (96.3/100), Cumulative GPA: 3.81/4.3 (95.8/100)

Case Western Reserve University   Aug 2022 - Dec 2022
Exchange Program   Cleveland, Ohio

RESEARCH EXPERIENCES

Bioinformatics & Machine Learning Lab, Chungbuk National University   Aug 2024 – Present
Research Intern   Cheongju, Korea
Advisor: Prof. Kyuri Jo
Designed a MAML-based few-shot learning model, utilizing transfer learning from TCGA data to predict non-cancer diseases using GEO data selected through DisGeNet-based Jaccard similarity, and leveraged Differential Gene Expression (DGE) analysis for biomarker discovery.
Integrated Reactome pathways as hidden layers and applied explainable AI (XAI) techniques, such as LRP, to enhance model interpretability and identify key biomarkers through relevance score analysis.

Research Project, Sogang University   Mar 2023 – Jun 2023
Undergraduate Researcher   Seoul, Korea
Advisor: Prof. Jungmin So
Developed an enhanced Federated Multi-Armed Bandit (FMAB) algorithm for cognitive radio, improving spectrum access, reducing regret, and minimizing exploration costs through spectrum sensing.
Simulations demonstrated that client cooperation in the enhanced algorithm reduced communication costs and enabled more efficient decision-making compared to independent client models. [pdf][code]

TECHNICAL EXPERIENCES

Google for Developers Machine Learning Bootcamp, Google Korea   Jul 2024 – Oct 2024
Selected Participant   Seoul, Korea
Engaged in a 14-week program combining deep learning theory (Andrew Ng's Deep Learning Specialization) with hands-on experience through Kaggle competitions and collaborative projects using Gemma open models.

Likelion Sogang, Likelion   Mar 2021 – Dec 2021
Front-end Developer   Seoul, Korea
Developed responsive and scalable user interfaces using React, HTML/CSS, and JavaScript for URL repository service, enhancing user experience by implementing URL saving, sharing, and keyword search functionality through hashtags and titles, streamlining collaboration and information retrieval.

27th Infantry Division, Republic of Korea Army (ROKA)   Jul 2019 – Jan 2021
Combat Medic Sergeant   Hwacheon, Korea
Led a squad during training missions, attained Special Warrior recognition, and provided medical support by assisting doctors, administering treatments, managing medications, and dispensing prescribed medicines.

TEACHING

5110134 Artificial Intelligence, Chungbuk National University   Fall 2024
Teaching Assistant (working with Prof. Kyuri Jo)

LEADERSHIP & SERVICES

Captain, STROKE (Sogang Swimming Club)	Fall 2023
Swimming Instructor for Children with Autism, Mapo Art Center Swimming Pool	Fall 2023
Member, STROKE (Sogang Swimming Club)	Spring 2022 - Fall 2023
English Tutor, P&E English, Seoul	Feb 2021 - Feb 2023
Squad Leader, 27th Infantry Division, ROKA	Jul 2020 - Jan 2021
Member, HUG (Sogang International Volunteer Club)	Spring 2017 - Spring 2019
Volunteer Korean Tutor for Korean Chinese, Yantai, China	Spring 2015 - Fall 2015

HONORS & AWARDS

Outstanding Startup Idea Award, Sogang University	Fall 2021
1st Place, Likelion Hackathon	Fall 2021
1st Place, Likelion Ideathon	Summer 2021

SKILLS

Programming Languages: C/C++, Python, Java, HTML/CSS, JavaScript, MySQL, Verilog
Frameworks/Packages: PyTorch, Pandas, scikit-learn, TensorFlow, Keras, NumPy, Matplotlib, React
Tools: Git/GitHub, VS Code, VS Community, PyCharm, Unix Shell, LaTeX
Languages: Native in **Korean**, Advanced in **English**, Intermediate in **Chinese**, Basic in **Spanish**

STANDARDIZED TEST SCORES

iBT TOEFL: 111 (Reading: 30/30, Listening: 29/30, Speaking: 28/30, Writing: 24/30)
GRE General Test: Verbal (157/170, 73%), Quant (170/170, 92%), Analytical Writing (4.5/6.0, 83%)