HYO-JEONG LEE

Gwangju, South Korea | hyojeonglee@gm.gist.ac.kr | +82-10-2896-0717 | LinkedIn | GitHub

Summary

Ambitious undergraduate in computer science with strong research experience in biomedical science. Highly motivated to study **mathematical models of neuronal network dynamics** using theoretical neuroscience and computational techniques.

Education

Gwangju Institute of Science and Technology(GIST) *Mar 2022 – Present*
BS in Computer Science (Minor in Biomedical Science and Engineering)

- GPA: 4.18/4.5
- **Key Courses:** Linear Algebra, Discrete Mathematics, Bio Statistics and Machine Learning, Intro. to Artificial Intelligence

University of California, Berkeley *Jan 2025 – May 2025*
Berkeley Global Access Program

Korea Advanced Institute of Science and Technology(KAIST) *Aug 2024 – Dec 2024*
Exchange Student

University of California, Berkeley *June 2023 – Aug 2023*
Summer Session Program

Research Experience

Brain Machine Intelligence Lab, KAIST *Daejeon, South Korea*
Research Intern (Advisor: Prof. Sang Wan Lee) *Sep 2024 – Dec 2024*

- Learned reinforcement learning frameworks for human behavior control by reviewing papers on state prediction error, reward prediction error, and their arbitration.
- Assisted graduate students with a literature review for a project building a navigation robot that collaborates with humans using prediction error signals on electroencephalogram(EEG).

BioComputing Lab, GIST *Gwangju, South Korea*
Research Intern (Advisor: Prof. Sung Chan Jun) *June 2024 – Aug 2024*

- Designed and conducted a project about human perception upon deepfake face images.
- Carried out an EEG experiment and its analysis.
- Attended the Brainwave School organized by Korean Society for EEG and Neurophysiology.

Neurophotonics Lab, GIST *Gwangju, South Korea*
Research Intern (Advisor: Prof. Euiheon Chung) *Dec 2022 – Feb 2024*

- Participated in a High Density Multi-Electrode Array(HD-MEA) project, focusing on research design and the initial experiment setup.
- Won third prize in the lab's annual workshop for a research proposal on optogenetic closed-loop stimulation in cell culture.
- Attended the SPIE Advanced Biophotonics Conference 2023.

Teaching Experience

PIUM *Sep 2022 – Nov 2022*
Volunteer Tutor

- Worked in a school education volunteer group to teach middle school students.
- Conducted weekly online science classes, selecting course contents and creating teaching materials.

Extracurricular Activities

AIleoDreamy: AI Newsletter Team *Nov 2024 – Present*
Writer

- Writing articles that explain AI concepts and issues in an easy-to-understand way for the public.
- Creating and uploading card news articles on Instagram.
- Wrote articles on the principles of AlphaFold, Variational Autoencoder(VAE), and Generative Adversarial Network(GAN).

Google Developer Student Clubs *Sep 2023 – Feb 2024*
School Core Team External Relations Leader

- Organized a hackathon with over 50 participants, being responsible for securing sponsorships from companies.
- Managed group studies and mentor sessions, adjusting team pacing and coordinating speaker invitations.

Buddy Program *Sep 2023 – Dec 2023*
Volunteer for International Freshmen

- Helped international freshmen by introducing the school systems and exploring the area together.
- Selected as the best buddy in the class.

Korean I-Corps *Jun 2022 – Feb 2023*
Product Manager & External Relations

- Worked in a mock startup team developing customized bra for breast cancer patients using image reconstruction.
- Learned the basics of startup thinking. Conducted public customer interviews, participated in product design, and managed meetings with mentors and experts.
- Proceeded to the final round in a startup program organized by the Ministry of Science and ICT.

Asian Science Camp *Jun 2022 – Jun 2022*
Representative of Korea

- Attended lectures by renowned researchers including Nobel Prize winners, to learn about their research topics.
- Had interactions with representatives from other countries and engaged in cultural exchange.

Skills

Experiment: *In Vitro* Neuron Culture, Vibratome, EEG, Mouse Handling, Mouse Behavior Test

Software: Brainwave5(3Brain), MATLAB, EEGLAB, UCINET, Figma, LaTeX

Programming: Python, C, R, Java

Language: Korean(Native), English(Fluent; TOEIC 945/990, TOEFL 104/120)

Awards & Honors

Government Funded Scholarship *Mar 2022 – Present*
GIST College

AI4GOOD Hackathon: 1st Place *Mar 2024 – Mar 2024*
GIST College & ALPS

- Won AWS AI Award for developing a braille pad system for the blind.
- Used AWS Rekognition model and OpenAI ChatGPT API.
- Worked as the team leader and project manager, and participated in data processing.

Academic Excellence Scholarship *Mar 2022 – Dec 2023*
GIST College