SUNGHYUN KANG

(+82) 10 3217 6864 ⋄ kanghyun51015@gm.gist.ac.kr
Department of EECS, GIST
Gwangju, Korea, 61005

Personal Statement
A committed student who is interested in application of computer science in a real world. Mainly interested in the intersection of these fields. Here's my personal homepage and GitHub.

EDUCATION

Gwangju Institute of Science and Technology(GIST) *March 2017 - Present*
Undergraduate, Senior Overall GPA: 3.83/4.5
Major in Electrical Engineering and Computer Science Major GPA: 4.08/4.5
Minor in Mathematics

University of California, Berkeley *January 2022 - May 2022*
Berkeley Global Access Program Overall GPA: 3.85/4.0
Exchange Student of GIST Total Credits: 16

SKILLS

Computer Languages	Python, MATLAB, R, C, JAVA, C++, Mathematica, Verilog
Software & Tools	LaTeX, Pytorch, EEGLAB, OR-tools
Language	Korean(Native), English(Fluent, iBT TOEFL score of 104)

EXPERIENCE

BioComputing Lab at GIST September 2022 - Present
Undergraduate Internship *PI: Prof. Sung Chan Jun*

· Studied on the relationship between eye movement and Brain power contamination.
· Currently writing a graduate thesis.

Introduction to algorithm class at GIST September 2022 - Present
Teaching Assistant

· Marked assignments and held office hours to answer students' questions.
· Conduct recitation courses for students.

CLOUDSTONE Inc. June 2022 - August 2022
AI Researcher Internship

· Solved various VRP(Vehicle Routing Problem) focused on hyper-local service.
· Made knowledge-based shop recommendation program processing large data by using neural networks and NLP.
· Participated in TIPS(Tech Incubator Program for Startup) and Series-A fund raising project.

BioComputing Lab at GIST May 2021 - December 2021
Undergraduate Internship *PI: Prof. Sung Chan Jun*

· Studied on the relationship between Transcranial Direct Current Stimulation (tDCS) applied to Posterior parietal cortex (PPC) and vigilance.
· Participated in a research to publish a conference paper in IBEC 2021.

HONORS & SCHOLARSHIP

GIST Academic Scholarship March 2021 - Present

· Scholarship awarded to students who showed high achievement in their grades.

Government-sponsored Scholarship at GIST March 2017 - Present

· Scholarship awarded to most of GIST students by the Korean government.

Scholarship for GIST Study Abroad Program January 2022 - May 2022

· Scholarship awarded to students participating in the GIST Study Abroad Program to UC Berkeley or Caltech. Only offered to 10 students per year.

GIST Summer Undergraduate Research Fellowship (G-SURF) June 2021 - August 2021

· Scholarship awarded to students participating in a summer internship program in GIST.

Award from Ministry of Culture, Sports and Tourism
Republic of Korea December 2019

· Received a prize for the high effort during 2018 Pyeongchang winter Olympic period. Offered for few selected participants who has noticeable achievements.

Scholarship for Summer Session Abroad, UC Berkeley June 2018 - August 2018

· Scholarship awarded to students studying abroad during a summer session.

GIST Academic Scholarship March 2017 - December 2017

· Scholarship awarded to students who showed high achievement in their grades.

ACADEMIC ACTIVITIES

Computational Models of Cognition: Implemented various cognitive & language models from the past to the present scheme using MDS(Multidimensional Scaling), MCMC(Markov Chain Monte Carlo), and information theory.

Probability and Random Process: Covered from probability scheme such as Bayes rule to various distributions/processes, information theory, Markov chain, hypothesis testing, Hilbert Space and Kalman filter.

Artificial Intelligence: Implemented various methods such as searching algorithms, SLAM(Simul--taneous Localization and Mapping), MDP(Markov Deicision Process), and learned basic ML(Machine Learning) and RL(Reinforcement Learning).

System Programming: Implemented a mini shell that is capable of executing commands, redirection, pipe, changing directory, and setting new environment variables.

Programming Language and Compilers: Implemented a lexical analyzer, parser, and semantic analyzer using Lex and Yacc. Made a Makefile compiler & parser for the final project.

RELEVANT COURSES

Major Courses
Computational Models of Cognition
Probability and Random Process
Introduction to Artificial Intelligence
Computer System Theory and Laboratory
Data structure and algorithms

Minor Courses
Numerical Analysis
Graph Theory
Linear algebra and its Application
Differential Equations

EXTRACURRICULAR ACTIVITIES

TIPS(Tech Incubator Program for Startup) June 2022 - August 2022
Research & Presentation Participant

· Successfully raised TIPS fund as a participant of Cloudstone Inc. Did a research for company's main technologies(VRP for many(100+) waypoints, robot based delivery system), made a basis for global strategies, and write a transcript for the presentation.

Brain Power Summer school August 2021
Participant

· Participated Brain power summer school hosted by Korean society for EEG and Neurophysiology to learn how to handle EEGLAB tools in the actual field studies.

Wolfram Research Korean Translation Volunteer October 2020 - February 2021
Team Member

· Participated in Wolfram Research Korean translation team. Focus on translating Mathematica user introduction video, examples, and basic knowledge about overall mathematics.

Republic of Korea Air Force March 2019 - January 2021
Reserve Sergeant

· Mandatory service. Worked as PATRIOT Missile operator, launching sequence simulator maintenance, and technical manual translator.

GIST Orchestra AKDONG March 2017 - November 2018
Woodwind instrument player, Concert director

· Joined as a clarinet player, Made a 2018 orchestra program.

2018 PyeoungChang Winter Olympic Committee June 2017 - Feburary 2018
Volunteer

· Worked in ACR(Accreditation Service) team. Did translation service for foreigners, made line-in-queue program for efficient workflow. Received Ministry Prize for these overall effort.