JAEHOAN KIM

Department of Statistics & Department of Mechanical Engineering
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EDUCATION

Seoul National University (SNU)   Mar. 2016 – Present
Double Major in Statistics and Mechanical Engineering
Overall GPA 4.02/4.3, Statistics GPA 4.15/4.3, *Summa Cum Laude expected*
Leave of absence for National Military service (Feb. 2018 - Jan. 2020)

Gyeonggi Science High School   Mar. 2013 – Feb. 2016
Specialized high school for gifted students in math and science (1 year early entrance)

PUBLICATIONS

1. **Kim, J. H.**, & Lee, J. (2021). Identifiability of covariance kernels in the Gaussian process regression model. *The Korean Data & Information Science Society*, 32(6), 1373-1392. https://arxiv.org/abs/2108.04715

RESEARCH INTEREST

Mathematical Statistics
Machine Learning
Interdisciplinary Studies
High-dimensional Data Analysis

RESEARCH EXPERIENCE

High dimensional multiple testing Laboratory, *Seoul National University*   Jun. 2021 – Present
Research Internship (Advisor: Prof. JunYong Park)
- Currently writing thesis paper comparing performances of linear classifiers in high-dimensional situation
- Studied various estimation methods of precision matrix in high dimensional classification
- Studied non-parametric mean estimation methods related to Stein's paradox

Bayesian Statistics Research Laboratory, *Seoul National University*   Aug. 2020 – Jun. 2021
Research Assistant (Advisor: Prof. Jaeyong Lee)
- Revealed and proved about identifiability problem in Mixed Gaussian Process Regression Model
- Experimented and analyzed about thermal conductivity of metals in Bayesian aspect

WORK EXPERIENCE

KBrainLab LLC.   Jun. 2021 – Present
Startup which provides Korean lottery number recommendation service
- Developed and implemented an algorithm that improved the expected value of lottery customers by 9%
- Formulated an algorithm that ensures 100% of winning high-rank lottery in a group aspect
- Took an initiative of founding as a Chief Technical Officer / Co-founder

20th Fighter Wing, *Republic of Korea Air Force*   Feb. 2018 – Jan. 2020
- Served and honorably discharged from Republic of Korea Air Force, Staff Sergeant

AWARDS

39th University Students Contest of Mathematics, *Korean Mathematical Society*   Dec. 2020
Grand Prize (1st place)

38th University Students Contest of Mathematics, *Korean Mathematical Society*   Dec. 2019
Gold Prize (2nd place)

31st Korean Mathematics Competition, *Korean Society of Mathematical Education*   Aug. 2015
Grand Prize (1st place)

HONORS

Young Engineer's Honor Society, *The National Academy of Engineering of Korea*   Sep. 2020 - Present
- Currently Deputy head in Strategy & Planning 1 Dept.

SNU Engineering Honor Society (STEM), *Seoul National University*   Sep. 2020 - Present
- Used to be Recruiting chief, currently a member of STEM

Hyunsong Scholarship, *Hyunsong Education & Culture Foundation*   Feb. 2017 - Present
- Merit–based scholarship (USD 6K per year)
- Nominated as the representative of the Department of Engineering

TEACHING EXPERIENCES

Mathematical Statistics 2, *Seoul National University*   Sep. 2021 - Present
- Hosted 10+ tutoring sessions in Mathematical Statistics 2, a requisite course for juniors in Dept. of Statistics

Dynamics and Fluid Mechanics, *Seoul National University*   Sep. 2020 - Feb. 2021
- Hosted 10+ tutoring sessions in Dynamics and Fluid Mechanics, a requisite course for juniors in Dept. of Mechanical Engineering

Calculus 1, Seoul National University   Jan. 2020 - Feb. 2020
- Assisted 10 freshmen with 5+ assignments and feedback about calculus 1 course

EXTRACURRICULAR ACTIVITIES

AI Tech Play   Jan. 2021 - Aug. 2021
- Led the Technology Team to deliver free AI education to 200+ middle school students struck by COVID-19
- Created a coding education booklet based on the autonomous RACECAR code materials from MIT Lincoln Lab.

Campus Mentoring Program, *Seoul National University*   Aug. 2020 - Dec. 2020
- Assisted the adaptation of 15 freshmen to university life as a mentor group leader

SNU Buddy, *Seoul National University*   Spring 2020, Spring 2021, Fall 2021
- Assisted exchange students to acclimate to Korean life through buddy program

Vice President, *Global Inter-culturing and Volunteering*   Aug. 2017 - Dec. 2017
- Organized camps and activities for the equal opportunity of education for students in underprivileged areas

X-corps (Practical Issue Research Contest), *Seoul National University*   Jul. 2017 - Jan. 2018
- Established a drone-based automated survivor detection system in a fire scene using a path-planning algorithm and a signal detection algorithm

Dream Camp Mentoring, *Seoul National University*   Jul. 2017
- Conducted mentoring program about "how to materialize one's dream" for high school students in countryside

Volunteer Camp, *Global Inter-culturing and Volunteering*   Jan. 2017, Aug. 2017, Jan. 2018
- Conducted extracurricular education for elementary school students in underprivileged areas as a team leader

Volunteer Camp, *Global Inter-culturing and Volunteering*   Aug. 2016
- Conducted various volunteers in Cambodia including education for 40+ elementary school students

SKILLS

Programming: R, Python, MATLAB, C, C++, LaTeX
English Skill: iBT: 109 (R30, L30, S22, W27), GRE: Verbal 157, Writing 4.0
GRE Subject Test: Mathematics (Scaled Score: 970, Percentile: 97%)