

JAEHOAN KIM

Department of Statistics & Department of Mechanical Engineering
Seoul National University
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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 mandatory 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. **JaeHoan Kim**, Jaeyong Lee, "Identifiability of Covariance Kernels in the Gaussian Process Regression Model", Accepted, *Journal of the Korean data & information Science Society*, <https://arxiv.org/abs/2108.04715>

RESEARCH INTEREST

Estimation Theory
Multivariate Data Analysis
Interdisciplinary Studies
Machine Learning

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)

31th 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++, L^AT_EX
English Skill: iBT: 109 (R30, L30, S22, W27), GRE: Verbal 157, Writing 4.0
GRE Subject Test: Mathematics (Scaled Score: 970, Percentile: 97%)