BONGSOO YI

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RESEARCH INTEREST

Statistical Machine Learning, Nonparametric Statistics, High-dimensional Statistics, Bayesian Statistics

EDUCATION

University of North Carolina at Chapel Hill   *Aug. 2020 - Present*
Ph.D. in Statistics   Chapel Hill, NC

Seoul National University (SNU)   *Mar. 2018 - Jun. 2018*
The integrated MS/Ph.D. Course of Science in Statistics   Seoul, Korea
Passed the Ph.D. qualifying exams (Theory of Statistics, Applied Statistics, Probability Theory)
Completed first semester and left for 2 years due to mandatory military service (Jul. 2018 - Jun. 2020)

Seoul National University (SNU)   *Mar. 2014 - Feb. 2018*
B.S. in Statistics; Class Rank: 3/31 (GPA: 3.86/4.30, Major GPA: 3.88/4.30)   Seoul, Korea

Sejong Science High School (SSHS)   *Mar. 2012 - Feb. 2014*
1 year early graduation; Specialized high school for gifted students in mathematics and science   Seoul, Korea

RESEARCH EXPERIENCE

KC Machine Learning Lab (KC-ML2), *KC*   *Jun. 2020 - Aug. 2020*
Research Intern (Advisor: Dr. Chan Y. Park)

- Conducted research on the geometric properties of value functions in Reinforcement Learing and attempted to find a connection between representation learning and the polytopal structure of value functions
- `https://blog.kc-ml2.com/value-function-geometry/`

Nonparametric Function Estimation Laboratory, *SNU*   *Dec. 2017 - Jun. 2018*
Research Intern (Advisor: Prof. Byeong U. Park)

- Studied nonparametric regression(local polynomial regression, kernel and spline smoothing) and wavelet
- Studied Nadaraya-Watson smooth backfitting method and proved the convergence of the algorithm
- Participated in 2018 SNU International Statistics Workshop

Bayesian Statistics Laboratory, *SNU*   *Jun. 2017 - Aug. 2017, Jun. 2019 - Jul. 2019*
Research Intern (Advisor: Prof. Jaeyong Lee)

- Forecast the fine dust concentration in Seoul using dynamic linear models and state space models
- Analyzed the causal relationship between mental illness and crime using Markov equivalence class of DAGs
- Participated in a 2 month lab seminar on "Bayesian Deep Learning with R"

IDEA Laboratory, *SNU*   *Jun. 2017 - Dec. 2017*
Research Intern (Advisor: Prof. Yongdai Kim)

- Participated in a 5 month lab seminar on "Deep Learning Architectures"
- Studied Natural Language Processing (NLP) with Deep Learning and life-long one-shot learning in recurrent neural networks on a large-scale machine translation task

Awards & Honors

Korean Government Scholarship for Overseas Study, *Korean Government*   *2020 - 2022*
• USD 40,000 for 2 years (4 students selected in the field of natural science nationwide)

Dean's List, *College of Natural Sciences, SNU*   *2017*
• An honor for students who showed top academic performance

National Scholarship for Science and Engineering, *Korea Student Aid Foundation*   *2016 - 2017*
• Full tuition for 2 years who showed top academic performance in the first and second years of university

Full Merit Scholarship, *SNU*   *2014 - 2015*
• Full tuition for students with top academic scores in the semester

36th National Undergraduate Mathematics Competition, *Korean Mathematical Society*   *Nov. 2017*
• Bronze Medal (Field 1: For mathematical majors)

2019 International Quant Championship, *WorldQuant*   *Mar. 2019 - Jul. 2019*
• Reached Stage 2 National Finals with excellent performances
• Received an offer from the WorldQuant Virtual Research Center for the Research Consultant Position

15th SAS Analysis Championship, *SAS Korea*   *Jun. 2017 - Aug. 2017*
• Top 13 finalist among over 300 teams
• Topic: Personalized Video Content Recommendation Analysis based on Mobile Behavior

SCSC Academic Scholarship, *Samsung Convergence Software Course*   *Aug. 2017*

23rd Seoul Mathematical Olympiad, *Seoul Metropolitan Office of Education*   *Jun. 2011*
• Grand prize (1st place)

Teaching Experience

033.019: Statistics, Teaching Assistant, *Department of Statistics, SNU*   *Spring 2018*
• Ran office hours for over 80 students every week, and graded all assignments and exams

033.016: Basic Calculus 1, Instructor, *Department of Mathematical Science, SNU*   *Spring 2017*
• Instructed and supervised students in the fundamental concepts of calculus

Personal Tutor *for middle school, high school and university students*   *Dec 2013 - Aug 2020*
• Mathematics (Calculus; Linear Algebra; Differential Equations; Number Theory)
• Statistics (Mathematical Statistics; Regression Analysis)
• Programming (Python; Java) and Computer Science (Algorithm; Data Structure)

Extracurricular Activities

Social Service Agent, *Songpa District Office*   *Jul. 2018 - Jun. 2020*
• Working in public service as an alternative to mandatory military service
• Received a citation from the Chief of Songpa-gu as a model social service agent (Dec. 2019)

Class President, *SNU*   *2014*
• Represented the class of 14

Skills & Additional Information

Programming Languages	R, Python, Java, SAS, C, LaTeX
Languages	Korean (native), English (fluent, TOEFL MyBest Scores: 110/120)
GRE Subject Test	Mathematics (Scaled Score: 970, Percentile: 99%)