Minji Kim

mkim5@unc.edu | https://mjkim1001.github.io | mjkim1001 | mjkim1001

Education

University of North Carolina at Chapel Hill (UNCCH) — *Chapel Hill, NC*
PH.D. STUDENT IN STATISTICS AND OPERATIONS RESEARCH — *Aug 2021 - May 2026 (expected)*
Advisor: Dr. Vladas Pipiras

Seoul National University (SNU) — *Seoul, South Korea*
MS STATISTICS, BS STATISTICS, MINORS IN COMPUTER SCIENCE AND ENGINEERING — *2015 - 2019 (BS), 2019 - 2021 (MS)*
MS Advisor: Dr. Hee-Seok Oh

Publications

M. Kim, T. Wen, K. Lee, Y. Choi. PINNs with conditional neural fields for reduced order modeling (In prep).

M. Kim, B. Brown, V. Pipiras. Parametric multi-fidelity Monte Carlo estimation with applications to extremes (In prep).

M. Kim, K. O'Connor, V. Pipiras, T. Sapsis. (2024), Sampling low-fidelity outputs for estimation of high-fidelity density and its tails, submitted to SIAM/ASA Journal of Uncertainty Quantification (Minor revision, arXiv:2402.17984v1).

M. Kim, V. Pipiras, A. Reed, K. Weems. (2023), 'Calibration of low-fidelity ship motion programs through regressions of high-fidelity forces', *Ocean Engineering* **290**, 116321.

M. Kim, H. Oh, and Y. Lim. (2023), 'Zero-Inflated Time-Series Clustering Via Ensemble Thick-Pen Transform', *Journal of Classification* **40**, 407–431.

Work Experience

Summer 2023 **Software Engineer Research Intern**, Moloco, WA, Seattle
- Identified distribution shift in the DL environment, formulated it using the ML terminologies, and proposed corrective weighting strategies. Extracted bidding price data using SQL to run simulation and draw inference.

Summer 2022 **Graduate Intern (NSF MSGI)**, Lawrence Livermore National Laboratory, remote
- Gained hands-on experience with data-driven large-scale physics simulation codes in C++ (***libROM***).

TECHNICAL SKILLS

Programming Julia, R, C++, Python, Java, C, SQL, Git, Linux, Bash, LaTeX.

Libraries and Tools PyTorch, TensorFlow, Keras, scikit-learn, glmnet, dplyr, pandas, NumPy, ggplot2, Matplotlib, Seaborn

Teaching Experience

Instructor for STOR 155 Introduction to Data Models and Inference (2024F, UNCCH)

Teaching Assistant for Introduction to Deep Learning (2022S, UNCCH), Methods of Data Analysis (2022S, 2021F, UNCCH), Sampling Design and Survey (2020F, SNU), Design and Analysis of Experiments (2020S, SNU), Lab (2020S, 2019F, SNU)

Awards and Scholarships

2024 **Graduate Student Transportation Grant Award**, UNCCH

2024 **SIAM UQ24 Student Travel Award**, SIAM

2022 **Cambanis-Hoeffding-Nicholson Award**, UNCCH
- An award for outstanding academic performance in first-year doctoral program

National Science Foundation Mathematical Sciences Graduate Internship (NSF MSGI), Oak Ridge Institute for Science and Education — *$ 12,000*

2021 **Korean Government Scholarship for Overseas Study**, Korean Government — *$ 80,000*
- 5 students in the Intelligent Infrastructure field selected nationwide

2015 **The Presidential Science Scholarship**, Korea Student Aid Foundation — *Full Tuition + Incentives*
- 24 students in the Mathematics field selected nationwide to foster the world's core scientist group