Hyungki Im

Email: hyungki.im@berkeley.edu

Education

University of California, Berkeley, Berkeley CA

- **PhD** in Industrial Engineering and Operations Research (IEOR). 2019 - present
- **PhD Candidate** in Industrial Engineering and Operations Research (IEOR) 2021 - present

Advisor: Prof. Paul Grigas

Seoul National University, Seoul, Republic of Korea 2012 - 2018

- Bachelor of Science, Department of Industrial Engineering
- Graduated with Summa Cum Laude
- 2-year absence to fulfill military duty 2014 – 2016

Research Interest

Optimization under Uncertainty, (Distributionally) Robust Optimization, Machine Learning, Data Analysis, Statistical Learning Theorey

Preprints

Hyungki Im, Paul Grigas **"Stochastic First-Order Methods for Constrained Distributionally Robust Optimization",** arxiv.org/abs/2305.16584

- Proposed a scalable stochastic algorithm for constrained distributionally robust optimization, which is scalable to both the dimension of decision variables and size of the data.

Hyungki Im, Paul Grigas **"Binary Classification with Instance and Label Dependent Label Noise", arxiv.org/abs/2306.03402**

- Prove that empirical risk minimization achieves the optimal rate under instance and label dependent label noise.

Working Paper

Hyungki Im , Jisun Lee, , Alper Atamturk **"Strong Formulation for Hybrid Control System"**

- Proposed a cut generation method for hybrid control system that led to a decrease in solving times

Invited Talks

International Conference on Continuous Optimization (ICCOPT) 2022, Lehigh University,

- Gave a talk on **"Stochastic First-Order Methods for Constrained Distributionally Robust Optimization"**

Informs Annual Meeting 2023

- Gave a talk on **"Stochastic First-Order Methods for Constrained Distributionally Robust Optimization"**

Fellowships, Awards, Honors

Silver award, Korean Supply Chain Management (SCM) competition for students 2018
National Scholarship for Science and Engineering, Korea Student Aid Foundation **(Full scholarship)** 2012 – 2017

Work Experience

Research Intern, Theorem LP – San Mateo, CA Summer 2023

- Tuned parameters of currently deployed model.
- Productionized tools for portfolio optimization problem.

Teaching Experience

University of California, Berkeley

- IEOR 142: Introduction to Machine Learning and Data Analytics Fall 2022
- IEOR 242: Applications in Data Analysis Fall 2021, Spring 2021
- IEOR 240: Optimization Analytics Fall 2020

Seoul National University

- Calculus 1 Spring 2017, Spring 2018

Programming Language

Python/pytorch (proficient), Matlab, AMPL