

Kartikey Sharma



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[LinkedIn](#)



[Google Scholar](#)

Researcher | **Delhi, India**

Researcher with a decade of experience in optimization and machine learning. Published 11 papers with 236 citations. Passionate about solving complex problems with data-driven approaches. Brings a strong foundation in mathematics and its application. Good at working in a team and guiding others.

Experience

Independent Researcher

Oct 2024 - current

Delhi, India

- Conducted research work on machine learning focused projects on boosting, sample reduction, etc.
- Consulted on a project to develop a new methodology for spare parts management.

Postdoctoral Researcher & Research Area Lead

Sep 2020 - Oct 2024

Zuse Institute Berlin, Germany

- Collaborated on research projects on optimization and machine learning with applications in Transportation and Healthcare. Directly worked with doctors and medical researchers to ensure practical usefulness.
- Developed and taught a course at TU Berlin on optimization under uncertainty. Worked with several Bachelor's and Master's students on their theses.
- Organized seminars and workshops on the use of machine learning for solving optimization problems, ran events to promote math education and research among undergraduates.
- Represented postdocs as a part of the Berlin Mathematics Research Center. Conducted polls to identify issues relevant to them and organized issues to address their concerns.

Research and Teaching Assistant

Sep 2014 - April 2020

Northwestern University, USA

- Developed models for solving robust optimization problems with decision-dependent and variable uncertainty sets.
- Led the INFORMS Student Chapter to organize sessions to help PhD students with choosing advisors, conducting research, career options, etc. Organized joint events with student chapters at other universities.
- Assisted in teaching courses on optimization, probability and statistics etc.

Research Scientist Intern

Jun 2018 - Aug 2018

Amazon, Seattle

- Developed optimal shipment flow models in the Supply Chain and Optimization Department. Developed a novel optimization model along with a parameter estimation procedure. Delivered evaluations of the final model through simulations of historical data.

Intern

May 2013 - Jul 2013

Deutsche Bank, Mumbai

- At the Custodial Services Department, worked on processes involved in foreign investment into India. Prepared a Key Operating Procedures manual for the bank's Account Documentation Team.

Education

PhD in Industrial Engineering

2015-2020

Northwestern University, Evanston, USA

(3.9/4)

M.S. in Industrial Engineering

2014-2015

Northwestern University, Evanston, USA

(3.9/4)

Integrated Dual Degree B.Tech + MBA, Process Engineering

2009-2014

IIT Roorkee, India

(9.1/10)

Achievements

Nemhauser Best Paper Award, Northwestern University

2018

- Best Research Paper in the Department

Silver Medallist, Graduation Class of 2014, IIT Roorkee

2014

- Ranked 1st in Department

Skills

Languages & Tools: Python, Julia, LaTeX, Git, PyTorch, SQL, C++, Cline

Soft Skills: Leadership, Team Work, Attention to Detail, Communication, Collaboration, Mentoring