

# Jiaqi Lei

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## EDUCATION

**McCormick School of Engineering, Northwestern University (NU)** Expected Jun. 2026

*PhD of Industrial Engineering and Management Sciences*

**GPA:** 3.741

**College of Engineering, University of Michigan (U of M)** Apr. 2021

*Bachelor of Science in Engineering in Industrial and Operations Engineering, Minor in Mathematics*

**Awards and Honors:** Dean's List, Roger King Scholarship, James B. Angell Scholar

**GPA:** 3.895

**University of Michigan-Shanghai Jiaotong University Joint Institute,** Aug. 2021

**Shanghai Jiaotong University (SJTU)**

*Bachelor of Science in Engineering in Electrical and Computer Engineering*

**GPA:** 3.5

## RESEARCH INTERESTS

**Methodology:** Stochastic Optimization, Robust Optimization, Nonlinear Optimization, Mixed Integer Optimization

**Applications:** Cloud Computing, Healthcare Operations, Supply Chain Management, Pricing

## PRESENTATIONS

“Stochastic Dominant Resource Allocation Fairness with Cloud Computing Applications”, presented at 2023 INFORMS Annual Meeting, Poster Session (Finalist), October 2023.

“Hybrid Simulation Model for Virus Transmission on the Diamond Princess Cruise Ship”, presented at 2020 Winter Simulation Conference, Poster Session, December 2020.

## PUBLICATIONS

Lei, Jiaqi, and Sanjay Mehrotra. “Convergence and Bound Computation for Chance Constrained Distributionally Robust Models using Sample Approximation.” arXiv preprint arXiv:2408.12018 (2024). (submitted to Operations Research Letters)

## WORKS IN PROGRESS

Jiaqi Lei and Sanjay Mehrotra. “A Framework for Stochastic Dominant Resource Allocation Fairness with Cloud Computing Applications”, paper in progress.

Jiaqi Lei, et al. “Patient Preference Change Over Time in Kidney Acceptances”, paper in progress.

## PROFESSIONAL EXPERIENCES

### NU

*Research Assistant*

Jun 2022 - Present

Advisor: Prof. Sanjay Mehrotra, Department of Industrial Engineering and Management Sciences, NU

- Provided an effective data-driven method for multi-resource allocation in cloud computing, considering the tradeoff between fairness and efficiency and the uncertainty of the resource requirements.
- Implemented a comprehensive analysis of patient preferences within the context of kidney transplantation, employing a Markov probability model with a fractional multinomial-logit regression model.

*Teaching Assistant*

Sep. 2022 – Dec 2023

- IEMS 450-1 Introduction to Linear Optimization (PhD)
- IEMS 385 Introduction to Health Systems Engineering (BS)

### U of M

## Research Assistant

Jan. – Apr. 2021

Advisor: Prof. Amy M. Cohn, Department of Industrial and Operations Engineering, U of M

- Helped the Veteran Affairs to locate eye care facilities and staff those facilities with the available providers throughout a region to make patients access nearby eye care clinics.
- Guided the hospital to arrange the backlog surgeries due to COVID-19 effectively.

## Teaching Assistant

Sep. – Dec. 2020

- IOE 310 Introduction to Optimization Method (BS)

## SKILLS

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Programming Languages: Python, R, Matlab, C/C++

Applications: Microsoft Office, Mathematica

## PHD COURSEWORK

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**Operations Research:** Linear Optimization, Nonlinear Optimization, Distributed Optimization, Integer Optimization, Convex Optimization, Logistics, Stochastic Process, Simulation

**Statistics:** Predictive Analytics, Econometrics, Applied Mathematics Statistics, Statistical Learning

## PROFESSIONAL MEMBERSHIPS

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The institute for Operations Research and the Management Sciences (INFORMS)

## LEADERSHIP AND ACTIVITIES

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Mechanical Contest | *Team Leader* | Shanghai

Mar. 2018 – May 2018

GXSSY Interview Club | *Club Leader* | Shanghai

Jan. 2018 – June 2019

## REFERENCE

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Prof. Sanjay Mehrotra

Department of Industrial Engineering and Management Sciences, NU, Evanston, IL

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