

# Michael Huang

<https://mh3166.github.io/>

CONTACT INFORMATION	Bridge Hall 401J 3670 Trousdale Pkwy Los Angeles, CA 90089	✉ <a href="mailto:huan076@usc.edu">huan076@usc.edu</a>
EDUCATION	<b>University of Southern California</b> , Los Angeles, CA Ph.D. Student in Data Sciences and Operations <i>Thesis</i> : Data-driven optimization for the small-data regime <i>Advisors</i> : Vishal Gupta, Paat Rusmevichientong	<b>2017-2022</b> (Expected)
	<b>Columbia University</b> , New York, NY M.S. in Operations Research B.S. in Operations Research, Minor in Computer Science	<b>2011-2016</b> 2016 2015
RESEARCH INTERESTS	Large-scale, data-driven optimization with scarce data and algorithm design with applications in transportation, healthcare, and recommender systems.	
PUBLICATIONS	M. Huang and C. Stein. Extending Search Phases in the Micali-Vazirani Algorithm. 16th International Symposium on Experimental Algorithms, pp. 10:1–10:19, 2017.	
WORKING PAPERS	V. Gupta, M. Huang, P. Rusmevichientong, "Decomposition Methods for Small-Data, Large-Scale Discrete Optimization." <i>Manuscript in Preparation. Targeted Journal Management Science</i>  C. W. Chan, M. Huang, V. Sarhangian, "Dynamic server assignment in multiclass queues with shifts, with application to nurse staffing in emergency departments." <i>Minor Revision</i>	
PROJECTS	<b>Emergency Department Nurse Scheduler</b> - Implemented web application to schedule nurses for a trial at Weill Cornell Medicine which significantly reduced wait times in the Emergency department. - Developed data-driven nurse scheduling policies by studying the discrete-time fluid control problem for a multiclass queuing system that minimizes holding cost	<b>2016-2017</b>
PROFESSIONAL EXPERIENCE	<b>Mora</b> , Boston, MA <i>Co-founder, Data Scientist</i> - Accepted into Harvard Business School Rock Incubator Venture Program - Developing a matching algorithm to improve the quality of behavioral healthcare experience and referral process. Currently collaborating with Harvard University Health Services.  <b>Aquant Capital Management, LLC</b> , New York, NY <i>Consultant</i> - Replicated a private equity fund strategy through a risk-adjusted portfolio of small, value stocks - Built a tool to numerically solve a game theory problem for use in a trading strategy  <b>Haidar Capital</b> , New York, NY <i>Generalist Intern</i> - Constructed VBA macros to automate P&L reconciliations and provide other operational support - Researched competitor funds focusing on macro strategy to identify potential and untapped ideas	<b>2019-Present</b>  <b>2016</b>  <b>2014-2015</b>

	<b>Commodity Futures Trading Commission</b> , New York, NY <i>Surveillance Analyst Intern</i> - Developed tools and quantitative models to detect disruptive trading signals	<b>2014</b>
TEACHING EXPERIENCE	<b>Columbia University</b> Teaching Assistant, CSOR 4231 Analysis of Algorithms I Course Assistant, IEOR 4405 Production Scheduling <b>University of Southern California</b> Teaching Assistant, BUAD 311 Operations Management	<b>Fall 2016</b> <b>Spring 2016</b> <b>Spring 2020</b>
HONORS AND AWARDS	<b>1st Place, Correlation One Datathon, Southern California</b> Data science competition with over 125 selected participants that used real datasets to answer open-ended problems about transportation in NYC with the 1st prize of \$20,000. We used network analysis models and Uber/Taxicab ride data to identify locations with under-served transportation needs. <b>Marshall/Graduate School Fellowship</b> Competitive fellowship for graduate students to support their doctoral work, covering their tuition and stipend. <b>The Robert Gartland Fellowship</b> Fellowship to support M.S. students in the Columbia IEOR department, who have demonstrated academic excellence and professional promise in engineering and its business applications.	<b>2017</b> <b>2017-2022</b> <b>2016</b>
CONFERENCES & INVITED TALKS	"Decomposition Methods for Small-Data, Large-Scale Discrete Optimization" • INFORMS Annual Meeting, Seattle, WA "Extending Search Phases in the Micali-Vazirani Algorithm" • Symposium on Experimental Algorithms, London, UK	<b>Oct. 2019</b> <b>Jun. 2017</b>
SERVICES	Conference Organization: INFORMS Session Chair 2019	
COMPUTING	Python, R, Julia, C/C++, SQL, Mathematica, Matlab, Gurobi	