

Michael Huang

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

CONTACT INFORMATION	Bridge Hall 401J 3670 Trousdale Pkwy Los Angeles, CA 90089	✉ huan076@usc.edu
EDUCATION	University of Southern California , 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	2017-2022 (Expected)
	Columbia University , New York, NY M.S. in Operations Research B.S. in Operations Research, Minor in Computer Science	2011-2016 2016 2015
RESEARCH INTERESTS	Large-scale, data-driven optimization with scarce data and algorithm design with applications in transportation, healthcare, and recommender systems.	
PUBLICATIONS	C. W. Chan, M. Huang, V. Sarhangian, "Dynamic server assignment in multiclass queues with shifts, with application to nurse staffing in emergency departments." <i>Operations Research</i> , to appear. 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, "Learning Policy Performance in the Small-Data, Large-Scale Optimization Regime." <i>Manuscript in Preparation. Targeted Journal Management Science</i>	
PROJECTS	Emergency Department Nurse Scheduler - 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	2016-2017
PROFESSIONAL EXPERIENCE	IBM , Yorktown Heights, NY <i>Research Intern</i> - Developing a dimension reduction algorithm to improve learning and scalability for optimal decision trees Mora , 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. Aquant Capital Management, LLC , 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 Haidar Capital , New York, NY <i>Generalist Intern</i>	2020-Present 2019-Present 2016 2014-2015

	<ul style="list-style-type: none"> - 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 	
	Commodity Futures Trading Commission, New York, NY	2014
	<i>Surveillance Analyst Intern</i>	
	<ul style="list-style-type: none"> - Developed tools and quantitative models to detect disruptive trading signals 	
TEACHING EXPERIENCE	Columbia University	
	Teaching Assistant, CSOR 4231 Analysis of Algorithms I	Fall 2016
	Course Assistant, IEOR 4405 Production Scheduling	Spring 2016
	University of Southern California	
	Teaching Assistant, BUAD 311 Operations Management	Spring 2020
HONORS AND AWARDS	1st Place, Correlation One Datathon, Southern California	2017
	2nd Place, Correlation One Datathon, West Coast Regional	2020
	Data science competition with over 125 selected participants that used real datasets to answer open-ended problems with the 1st prize of \$20,000. We used statistical and network analysis models to answer questions about transportation like Uber and Citibike and offer policy suggestions	
	Marshall/Graduate School Fellowship	2017-2022
	Competitive fellowship for graduate students to support their doctoral work, covering their tuition and stipend.	
	The Robert Gartland Fellowship	2016
	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.	
CONFERENCES & INVITED TALKS	“Decomposition Methods for Small-Data, Large-Scale Discrete Optimization”	
	<ul style="list-style-type: none"> • INFORMS Annual Meeting, Seattle, WA 	Oct. 2019
	“Extending Search Phases in the Micali-Vazirani Algorithm”	
	<ul style="list-style-type: none"> • Symposium on Experimental Algorithms, London, UK 	Jun. 2017
SERVICES	Conference Organization: INFORMS Session Chair 2019	
COMPUTING	Python, R, Julia, C/C++, SQL, Mathematica, Matlab, Gurobi	