

## Jackie Baek

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CONTACT	baek@stern.nyu.edu	<a href="https://jwbaek.github.io">https://jwbaek.github.io</a>
EMPLOYMENT	<b>New York University, Stern School of Business</b> Assistant Professor, Technology, Operations & Statistics	2023 -
	<b>Simons Institute for the Theory of Computing, UC Berkeley</b> Research Fellow in the program <i>Data-Driven Decision Processes</i>	Fall 2022
EDUCATION	<b>Massachusetts Institute of Technology</b> Ph.D. in Operations Research Thesis: Decision-Making Under Uncertainty: From Theory to Practice Advisor: Vivek F. Farias	2016 - 2022
	<b>University of Waterloo</b> Bachelor of Mathematics Joint Honours Computer Science & Combinatorics and Optimization	2011 - 2016
PUBLICATIONS	<b>Fair Exploration via Axiomatic Bargaining</b> with Vivek F. Farias <i>Management Science (Accepted)</i> Preliminary version: <i>NeurIPS 2021 (Spotlight, top 3% of submissions)</i> <ul style="list-style-type: none"><li>★ Second Place, <i>MSOM Student Paper Competition 2022</i></li><li>★ Finalist, <i>George Nicholson Student Paper Competition 2021</i></li><li>★ Finalist, <i>RMP Jeff McGill Student Paper Award 2021</i></li><li>★ Honorable Mention, <i>MIT ORC Best Student Paper Competition 2021</i></li><li>★ Oral presentation, <i>1st ACM Conference on Equity &amp; Access in Algorithms, Mechanisms, &amp; Optimization, 2021</i></li></ul> <b>Bifurcating Constraints to Improve Approximation Ratios for Network Revenue Management with Reusable Resources</b> with Will Ma <i>Operations Research, 2022</i> Preliminary version: <i>12th International Symposium on Algorithmic Game Theory, 2019</i> <b>TS-UCB: Improving on Thompson Sampling With Little to No Additional Computation</b> with Vivek F. Farias <i>AISTATS 2023</i> <b>Evaluation of individual and ensemble probabilistic forecasts of COVID-19 mortality in the United States</b> with COVID-19 Forecast Hub <i>Proceedings of the National Academy of Sciences, 2022</i> <ul style="list-style-type: none"><li>- This paper resulted from contributing COVID-19 forecasts (from the paper “The Limits to Learning a Diffusion Model”) to the COVID-19 Forecast Hub.</li></ul> <b>A Game-Theoretic Analysis of Reallocation Mechanisms for Airport Landing Slots</b> with Hamsa Balakrishnan <i>IEEE Transactions on Intelligent Transportation Systems, 2020</i>	

WORKING PAPERS	<b>The Limits to Learning a Diffusion Model</b> with Vivek F. Farias, Andreea Georgescu, Retsef Levi, Tianyi Peng, Deeksha Sinha, Joshua Wilde, Andrew Zheng Major revision, <i>Management Science</i> Preliminary version: <i>22nd ACM conference on Economics and Computation, 2021</i>		
	<b>Policy Optimization for Personalized Interventions in Behavioral Health</b> with Justin J. Boutilier, Vivek F. Farias, Jónas Oddur Jónasson, Erez Yoeli		
	<b>Leveraging Reusability: Improved Competitive Ratio of Greedy for Reusable Resources</b> with Shixin Wang		
TEACHING EXPERIENCE	<b>Operations Management (15.778)</b> <i>Teaching Assistant</i> for Sloan Fellows MBA Students Summer 2020		
	<b>The Analytics Edge (15.071)</b> <i>Teaching Assistant</i> for MBA Students Spring 2018		
	<b>Computing in Optimization and Statistics (15.S60)</b> <i>Instructor</i> for a 3-hour lecture on computing tools for PhD students 2017, 2018		
INVITED TALKS	<b>2023:</b> CUHK Business School, IMSI Workshop on Analytics for Improved Healthcare, NYU Digital Health Research Workgroup, UMass Amherst CS Theory		
	<b>2022:</b> Northwestern Kellogg, Columbia IEOR, USC Marshall, Johns Hopkins Carey, NYU Stern, Stanford GSB, Duke Fuqua, Yale SOM, Michigan Ross, Chicago Booth, UToronto Rotman Young Scholar Seminar, Caltech RSRG, LinkedIn Responsible AI		
	<b>2021:</b> UPenn Wharton, UBC Sauder, UNC Kenan-Flagler, Cornell ORIE, MIT OM Seminar, MIT Data Science Lab Seminar, Cornell Young Researchers Workshop		
SERVICE	Reviewer for Journals: <i>Operations Research, Management Science, Manufacturing &amp; Service Operations Management, Operations Research Letters, European Journal of Operational Research, Journal of Machine Learning Research, IEEE Control Systems Letters, IEEE Transactions on Intelligent Transportation Systems, INFORMS Journal on Computing</i>		
	Program Committee/Reviewer for Conferences: <i>FACCT 2022/2023, WINE 2022, ALT 2023, The Web Conference 2023, AISTATS 2023, EC 2023, EAAMO 2023, NeurIPS 2023</i>		
	Session Chair, INFORMS Annual Meeting	2021, 2022, 2023	
	Student Coordinator, MIT ORC Seminar Series	Fall 2020	
HONORS AND AWARDS	Student Coordinator, MIT OM Seminar Series	Spring 2020	
	Second Place, MSOM Student Paper Competition	2022	
	Finalist, George Nicholson Student Paper Competition	2021	
	Finalist, RMP Jeff McGill Student Paper Award	2021	
	Honorable Mention, MIT ORC Best Student Paper Competition	2021	
	Finalist, Post-Pandemic Supply Chain and Healthcare Management Best Paper Competition	2021	
	Runner-up, MIT LIDS Student Conference Best Presentation	2018	
	NSERC Undergraduate Student Research Award	2015	

	Professional Education Foundation Scholarship, University of Waterloo	2014
	Mathematics National Scholarship, University of Waterloo	2011 - 2016
WORK EXPERIENCE	<p><b>GRAIL</b> Palo Alto, CA  <i>Machine Learning Engineer Intern</i> Summer 2018  Investigated genomic features on its ability to improve detecting early-stage cancer</p> <p><b>Snap</b> Venice, CA  <i>Software Engineer Intern</i> Fall 2014, Summer 2016  Improved app startup performance by implementing incremental updates</p> <p><b>Bloomberg</b> London, UK  <i>Software Engineer Intern</i> Fall 2015  Optimized a financial dashboard using a dependency graph to minimize redundant function calls</p> <p><b>Dropbox</b> San Francisco, CA  <i>Software Engineer Intern</i> Fall 2013, Spring 2014  Optimized sync by implementing delta compression using finite-state machines</p> <p><b>LogicBlox</b> Atlanta, GA  <i>Software Engineer Intern</i> Spring 2013</p> <p><b>Axentra</b> Ottawa, Canada  <i>Software Engineer Intern</i> Summer 2012</p>	
VOLUNTEER EXPERIENCE	<p><b>COVID-19 Alliance Senior Support Team of New Hampshire</b>  <i>Data Scientist</i> 2020 - 2021  Built and deployed an automated communication system (SMS and email) with all senior residential facilities in NH, used daily from April 2020 to June 2021</p> <p><b>Sidney-Pacific Graduate Student Residence (MIT)</b>  <i>Brunch Chair</i> 2016 - 2018  Led a group of ~50 volunteers every month to cook brunch for 300+ residents</p>	
OTHER	<p>Citizenship: Canadian</p> <p>Hobbies: squash, running, snowboarding, basketball</p>	