Alexander Michael Weinstein

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EDUCATION

Massachusetts Institute of Technology, Cambridge, MA
Candidate for PhD in Operations Research; expected completion, June 2017. GPA: 4.6/5.0
Advisor: Professor Dimitris Bertsimas
Thesis: *"From Data to Decisions in Healthcare: Toward Personalized Medicine"*

Yale University, New Haven, CT
BA *cum laude* in Economics & American Studies, May 2009. GPA: 3.83/4.00
Thesis: "*Reconstructing a Creole City: Place-based Housing Design in New Orleans, Past and Present"*

EXPERIENCE

2012-Present **Massachusetts Institute of Technology,** Cambridge, MA
Graduate Research Assistant for Professor Dimitris Bertsimas, 2014-Present
I am studying applications of optimization, statistics, and machine learning to improve decision-making in three settings: 1) personalized medicine for patients with type 2 diabetes and cancer; 2) optimized treatment allocation in clinical trials; and, 3) revenue forecasting and optimized personnel management for Publicis.Sapient, a global consulting firm.

Graduate Research Assistant for Professor David Simchi-Levi, 2012-2014
My research focused on maximizing revenue via dynamic pricing with online demand learning. We partnered with two large companies in the daily deals and flash sale industries to implement dynamic pricing algorithms using dynamic programming and machine learning.

Graduate Teaching Assistant, Sloan School of Management
- 15.727 The Analytics Edge, Executive MBA Program, Spring 2016
- 15.071/15.727 The Analytics Edge (Student evaluations: 6.5/7.0), Spring 2015.
- 15.071x The Analytics Edge on MITx/edX online education platform, Summer 2015.
- 15.762 Supply Chain Planning (6.3/7.0), Spring 2014.
- 15.763 Manufacturing System and Supply Chain Design (6.2/7.0), Spring 2014.

Responsibilities included: teaching weekly recitations, developing course materials, grading assignments, holding office hours, answering student questions by email.

2014 **Amazon,** Seattle, WA
(Summer) *Research Scientist Intern*, Inventory Planning and Control (IPC), Fulfillment Optimization
I completed two data science projects evaluating ways to reduce costs and improve efficiency in the fulfillment of customer orders. My results informed management decisions in this area.

2010-2012 **Brigham and Women's Hospital, Orthopaedics and Arthritis Center for Outcomes Research,** Boston, MA
Research Assistant (full-time) in the Osteoarthritis Policy Group
I conducted decision analysis studies using a Markov chain Monte Carlo computer simulation model of the natural history, progression, and treatment of knee osteoarthritis.

SELECTED PUBLICATIONS

"*Personalized Diabetes Management Using Electronic Medical Records*", with D. Bertsimas, N. Kallus, and Y. Zhuo. Under Review.

"*Covariate-Adaptive Optimization in Online Clinical Trials*", with D. Bertsimas and N. Korolko. Under Review.

"*Lifetime Medical Costs of Knee Osteoarthritis Management in the United States: Impact of Extending Indications for Total Knee Arthroplasty*", with E. Losina, A. Paltiel, et al. Arthritis Care & Research, 2015.

"*Estimating the Burden of Total Knee Replacement in the United States*", with B. Rome, W. Reichmann, et al. The Journal of Bone & Joint Surgery, 2013.

"*Lifetime Risk and Age of Diagnosis of Symptomatic Knee Osteoarthritis in the US*", with E. Losina, W. Reichmann, et al. Arthritis Care & Research, 2013.

Full list of publications available at http://amw22.scripts.mit.edu/home/research/.

CONFERENCE PRESENTATIONS

"*Personalized Diabetes Management,*" with D. Bertsimas, N. Kallus, and D. Zhuo. American Diabetes Association Scientific Meetings; June 2016. New Orleans, LA.

"*Dynamic Pricing and Demand Learning with Limited Price Experimentation,*" with D. Simchi-Levi and H. Wang. INFORMS MSOM Conference; June 2014. Univ. of Washington, Seattle, WA.

"*Dynamic Pricing and Demand Learning with Limited Price Experimentation,*" with D. Simchi-Levi and H. Wang. INFORMS MSOM Conference; July 2013. INSEAD, Fontainebleau, France.

HONORS AND AWARDS

Nominated participant in Doctoral Student Colloquium at 2015 INFORMS Annual Meeting.

Norman Holmes Pearson Prize (awarded to the best senior essay) and distinction in the major, American Studies department, Yale University, 2009.

Robert Kim Winslow Award (awarded for community leadership) and Master's Cup community spirit award, Yale University, 2009.

LEADERSHIP *Co-coordinator,* Operations Research Center Fall Seminar Series, 2015.
Department peer counselor, MIT Resources for Easing Stress and Friction (REFS), 2015-Present.
President, INFORMS Society at MIT, 2013.

SKILLS *Programming/Software*: R, Julia, Python, Perl, SQL, MATLAB, Linux, LaTeX, Java, VBA.

CITIZENSHIP Citizen of United States of America