Diana Michalek Pfeil

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Education

Massachusetts Institute of Technology　　　　　September 2006–June 2011
Ph.D. in Operations Research　　　　　Advisor: Prof. Hamsa Balakrishnan
Thesis: Optimization of Airport Terminal-Area Air Traffic Operations under Uncertain Weather Conditions

University of California at Berkeley　　　　　September 2000–May 2004
B.A. in Computer Science with Honors
B.A. in Mathematics

Key Courses: Logistics and Supply Chain Management, Systems Optimization, Machine Learning, Combinatorial Optimization and Integer Programming, Mathematical Programming, Fundamentals of Probability, Network Optimization, Discrete Stochastic Processes, Scheduling, Operating Systems and Systems Programming, Efficient Algorithms and Intractable Problems, Computability and Complexity, Randomized Algorithms.

Experience

Massachusetts Institute of Technology　　　　　Cambridge, MA
Research Assistant in the International Center for Air Transportation　June 2007–May 2011
· Developed mathematical models to improve aircraft flow and airspace capacity by integrating air traffic flow management methods with state-of-the-art aviation weather forecasts.
· Presented research results at major academic and aviation conferences, including the 2009 ATM R&D Seminar.

Analytics Operations Engineering, elite consulting firm　　　　　Boston, MA
Summer Analyst　　　　　Summer 2008
· Evaluated the inventory management system of a major industrial goods company, recommending policy changes to increase profit with minimal changes to inventory levels. Analyzed and mined raw data from a large warehouse.
· Developed forecasting approaches to improve prediction of product end-of-life for a major luxury retailer.

Amazon.com　　　　　Seattle, WA
Software Development Engineer　　　　　January 2005–July 2006
· Coded, performance tested, documented, and supported a generic BDB data retrieval web service, used by tens of Amazon teams.
· Worked on Behavior Based Search, a system which mined over 100 GB of customer behavior data to suggest highly relevant search results.
· Worked on the Digital Discovery team on the research and development of new features based on hundreds of thousands of books' worth of Search Inside the Book (SITB) text.
· Designed and Coded a search service built on top of Lucene for International SITB Search.

DIMACS　　　　　Student Researcher in REU program
Piscataway, NJ　　　　　Summer 2004
· Worked with Professor Paul Kantor on automated email authorship identification. Wrote Perl scripts to extract features of text and determine authorship through various statistical methods.

Technical Skills

· Languages: Python, R, Perl, Java, C, Scheme, MATLAB, SQL, unix utilities
· Optimization: CPLEX, APML, OPL Studio
· Emacs, git, comfortable with all major operating systems, agile development and TDD

Leadership and Activities

· Teaching Assistant for undergraduate class "Statistical Thinking and Data Analysis". Lead weekly recitation sessions, and office hours. Received positive reviews from students.
· Officer for MIT Chapter of INFORMS, 2007.