

Jacob O. Miller

US CITIZEN

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Objective

Seeking position as an Operations Research Analyst

Education

- **The Ohio State University** **Columbus, OH**
College of Engineering, M.S. Operations Research GPA 3.91 (4.0) 2010 – 2011
College of Engineering, B.S. Industrial and Systems Engineering GPA 3.54 (4.0) 2006 – 2010
 - Thesis: The Economic Impact of Emissions Caps on Plug-in Hybrid Electric Vehicles
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Work Experience

- **U.S. Department of Energy**, Energy Information Administration **www.eia.gov**
Operations Research Analyst Summer 2011
 - On the development team for the Liquid Fuels Market Model of the National Energy Modeling System used to forecast U.S. oil usage for the Annual Energy Outlook report
 - Developed a robust optimization approach to improve the model under uncertainty
 - Automated output reporting tools for internal model tuning
 - **Pilkington** **www.pilkington.com**
Supply Chain Analyst Spring 2011
 - Developed optimization model to determine placement of additional distribution centers for Pilkington's North American supply chain to minimize customer replenishment times
 - **The Ohio State University**, Department of Industrial and Systems Engineering **www.ise.osu.edu**
Graduate Teaching Associate 2010 – Present
 - Instructed linear programming and scheduling courses for engineers
 - Responsible for teaching software packages and grading tests and projects
 - **Sandvik - Diamond Innovations** **www.sandvik.com**
Project Manager 2009 – 2010
 - Cost savings through variation reduction totaled \$40k annually
 - Project used a statistically designed experiment to optimize production processes
 - Received Lean/Six Sigma greenbelt certification from The Ohio State University
 - **The Ohio State University Medical Center**, Management Services **www.medicalcenter.osu.edu**
Management Engineer 2008 – 2009
 - Identified top savings opportunities within the organization each quarter through benchmarking
 - Prepared decision support information for weekly upper management meetings
 - Managed highly sensitive budget and staffing information
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Research Experience

- **Cardinal Health Inc** **www.cardinal.com**
Research Assistant, Professors J.L. Higle & C.H. Xia Summer 2010
 - Developed methodology to identify customer ill-intent in pharmaceutical purchases to comply with DEA regulations through the use of data mining techniques
 - Extensive use of SAS, Visual Basic, and R to manipulate and analyze large data sets
- **The Ohio State University**, Department of Industrial and Systems Engineering **www.ise.osu.edu**
Research Assistant, Professor R. Sioshansi 2009 – 2010

- Developed a large-scale mixed integer program to investigate plug-in hybrid electric vehicle charging cycles and economics under emissions constraints
 - Received funding from The Ohio State University Honors Committee
 - Presented results at the Denman Forum at The Ohio State University
- **The Air Force Institute of Technology**, Center for Operational Analysis
Research Assistant
– Investigated statistical methods to reduce sample sizes for Department of Defense testing and evaluation
– Worked with the Air Force Global Logistics Support Center

www.afit.edu/en/coa
Summer 2009

Qualifications and Interests

Interests: Stochastic Models, Game Theory, Machine Learning
Languages: SQL, Java, Python, R, \LaTeX , AMPL, CPLEX, GAMS, VB
Personal: Project management, public and professional presentation
Certifications: Lean/Six Sigma greenbelt from OSU

Publications

R. Sioshansi and J. Miller, “Plug-in Hybrid Electric Vehicles Can Be Clean and Economical in Dirty Power Systems,” *Energy Policy*, Vol 39, No 10, pp 6151-6161, October, 2011.

Relevant Coursework

Linear, non-linear and integer programming, analysis of algorithms, stochastic processes, decision analysis, scheduling, inventory planning, discrete event simulation, statistical process control, design and analysis of experiments, project management

Professional Organizations

- **The Institute for Operations Research and Management Science**
Member OSU & National Chapters
www.informs.org
2008 – Present
- **Institute of Industrial Engineers**
Member, OSU, NE Region, National Chapters
www.iienet.org
2007 – Present
- **Alpha Pi Mu Industrial Engineering Honorary**
Officer, OSU Chapter
www.alphapimu.net
2008 – 2010

Honors and Accomplishments

- The Ohio State University, Graduate Teaching / Research Assistantship
2010 – 2014
- Graduated Cum Laude and with Distinction
2010
- Runner-up 2008 IIE International Simulation Competition
2008 – 2009
- Honors Societies: Alpha Pi Mu, Alpha Lambda Delta, Phi Eta Sigma

Personal Interests

Piano, Guitar, Running, Basketball, Ohio State athletics, RTS/RPG games, Computers