

# Matt Wytock

---

<b>Contact</b>	<p>mwytock@cs.cmu.edu www.cs.cmu.edu/~mwytock 8305 Gates Building Pittsburgh, PA 15213</p>
<b>Education</b>	<p><b>PhD, Machine Learning</b>, 2016 (expected) <b>Carnegie Mellon University</b>, Pittsburgh, PA Thesis: Optimizing optimization: Scalable convex programming with proximal operators Advisor: Zico Kolter</p> <p><b>Master of Science, Machine Learning</b>, 2014 <b>Carnegie Mellon University</b>, Pittsburgh, PA</p> <p><b>Bachelor of Science, Computer Science</b>, 2005 <b>University of California, San Diego</b></p>
<b>Preprints</b>	<p>Convex programming with fast proximal and linear operators. Matt Wytock, Po-Wei Wang and J. Zico Kolter. November, 2015.</p> <p>Probabilistic segmentation via total variation regularization. Matt Wytock and J. Zico Kolter. November, 2015.</p> <p>A fast algorithm for sparse controller design. Matt Wytock and J. Zico Kolter. December, 2013.</p>
<b>Publications</b>	<p>Preventing cascading failures in microgrids with one-sided support vector machines. Matt Wytock, Srinivasa Salapaka and Murti Salapaka. IEEE Conference on Decision and Control, 2014.</p> <p>Fast Newton methods for the group fused lasso. Matt Wytock, Suvrit Sra and J. Zico Kolter. Conference on Uncertainty in Artificial Intelligence, 2014.</p> <p>Contextually supervised source separation with application to energy disaggregation. Matt Wytock and J. Zico Kolter. AAAI Conference on Artificial Intelligence, 2014.</p> <p>Large-scale probabilistic forecasting in energy systems using sparse Gaussian conditional random fields. Matt Wytock and J. Zico Kolter. IEEE Conference on Decision and Control, 2013.</p> <p>Sparse Gaussian conditional random fields: Algorithms, theory and applications to energy forecasting. Matt Wytock and J. Zico Kolter. International Conference on Machine Learning, 2013.</p>
<b>Honors and Awards</b>	<p>Siebel Scholar, Energy Science, 2016.</p> <p>National Science Foundation Graduate Research Fellowship, Honorable Mention, 2010.</p> <p>Google Founders' Award (for Google's top achievements): Search-based keyword tool, 2010.</p>

Google Operating Committee Award (for top 10 achievements of each year): Custom Search Engine, 2009.

**Teaching  
Experience**

**10-725: Convex Optimization.** Teaching Assistant, Carnegie Mellon University, Fall 2015. Instructor: Ryan Tibshirani.

**10-702: Statistical Machine Learning.** Teaching Assistant, Carnegie Mellon University, Spring 2014. Instructors: Larry Wasserman and Ryan Tibshirani.

**Industry  
Experience**

**Senior Staff Software Engineer**, 2005-2015

**Google**, Mountain View, CA

Built and led teams in search, ads as well as new product areas.

**Assistant Software Engineer**, 2002-2005

**Neurome**, San Diego, CA

Developed computational methods for neuroscience.

**Student Programmer**, 2002

**Center for Atmospheric Sciences, Scripps Institute of Oceanography**, San Diego, CA

Data processing for simulations of atmospheric physics.

**Patents**

Generating and displaying tasks. R. Guha, R. Srikant, V. Gupta, D. Martin, M. Manjunatha, A. Dai, C. Au, E. Erbiceanu, S. Gupta, M. Wytock, C. Lischke, III, V. Raghunathan. Filed December 5, 2013. Google, Inc.

Automatic ad creative generation. L. Brunsman, S. Rajaraman, P. Deshwal, M. Wytock, S. Kates. Filed July 28, 2011. Google, Inc.

Automatic abstracted creative generation from a web site. L. Brunsman, S. Rajaraman, P. Deshwal, M. Wytock, S. Kates. Filed July 28, 2011. Google, Inc.

Targeting content without keywords. L. Brunsman, S. Rajaraman, P. Deshwal, M. Wytock, S. Kates. Filed July 19, 2010. Google, Inc.

Dynamic specification of custom search engines at query-time, and applications thereof. O. Hansson, M. Wytock, P. Riley, R. Guha. Filed March 11, 2008. U.S. Patent 8892552. Google, Inc.

Systems and methods for customizing behavior of multiple search engines. P. Riley, R. Guha, C. Anderson, M. Wytock, O. Hansson. Filed January 11, 2008. U.S. Patent 7801876 and 8301615. Google, Inc.