

Calvin McCarter

www.cs.cmu.edu/~cmccarte

CONTACT INFORMATION	8008 Gates Center, 5000 Forbes Ave. Pittsburgh, PA 15213	calvinm@cmu.edu (616) 272-0909
EDUCATION	Carnegie Mellon University , Pittsburgh, PA <i>Ph.D. in Machine Learning</i> ▷ Advisor: Seyoung Kim	August 2013 - Present GPA: 3.80/4.00
	University of Michigan , Ann Arbor, MI <i>Bachelor of Science in Engineering</i> ▷ Major: Computer Science, Minor: Mathematics	August 2009 - May 2013 GPA: 3.98/4.00
RESEARCH EXPERIENCE	Carnegie Mellon University , Pittsburgh, PA <i>Machine Learning for Computational Genomics</i> Working under the supervision of Seyoung Kim to develop sparse models and scalable optimization algorithms for tasks in computational genomics.	August 2013 - Present
	Van Andel Research Institute , Grand Rapids, MI <i>Cancer and Proteomics Research</i> Worked under the supervision of Brian Haab to apply feature selection method to pancreatic cancer biomarker discovery and to validate method on proteomics database.	May 2013 - August 2013
	University of Michigan , Ann Arbor, MI <i>Electronic Design Automation Research</i> Worked under the supervision of Valeria Bertacco and Debapriya Chatterjee to develop post-silicon validation method. Designed and implemented parallel algorithm in CUDA.	January 2011 - July 2011
	<i>Ad Auctions Bidding Agent Research</i> Analyzed data from simulated advertising auctions under the supervision of Michael Wellman to understand impact of bidding strategies on advertiser profitability.	May 2010 - August 2010
WORK EXPERIENCE	Google , Mountain View, CA <i>Software Engineering Intern</i> Worked on server backend for Google Flight Search, developing functionality to improve quality of results for live Flight Search queries.	May 2012 - August 2012
	Arbor Networks , Ann Arbor, MI Implemented instrumentation in deep packet inspection system and prepared performance analysis tools geared to IPv6 transition.	May 2011 - August 2011
AWARDS	Outstanding Research Award, University of Michigan EECS Department, 2013 Henry Ford II Prize, University of Michigan College of Engineering, 2012 James B. Angell Scholar, University of Michigan, 2012 1st Place, Cooley Essay Writing Contest, University of Michigan, 2011 National Merit Scholar, 2009 Finalist, US National Chemistry Olympiad, 2009 National Champion, National Geographic Bee, 2002	

PEER-REVIEWED PUBLICATIONS	<p>C. McCarter and S. Kim, “Large-Scale Optimization Algorithms for Sparse Conditional Gaussian Graphical Models”, <i>International Conference on Artificial Intelligence and Statistics (AISTATS)</i>, 2016</p> <p>C. McCarter and S. Kim, “On Sparse Gaussian Chain Graph Models”, <i>Advances in Neural Information Processing Systems (NIPS)</i>, 2014</p> <p>C. McCarter, D. Kletter, H. Tang, K. Partyka, Y. Ma, S. Singh, J. Yadav, M. Bern, B. Haab, “Prediction of Glycan Motifs Using Quantitative Analysis of Multi-lectin Binding”, <i>Proteomics Clinical Applications</i>, vol: 7, issue: 9-10, 2013</p> <p>D. Chatterjee, C. McCarter, V. Bertacco, “Simulation-based Signal Selection for State Restoration in Silicon Debug”, <i>International Conference on Computer-Aided Design (ICCAD)</i>, 2011</p>	
REFEREED PUBLICATIONS	<p>S. Moon, C. McCarter, YH Kuo, “Active learning with partially featured data”, <i>Proceedings of the 23rd International Conference on World Wide Web</i>, 2014</p>	
INVITED TALKS	<p><i>Multi-modal Structure Learning in High Dimensions for Integrative Genomics</i>. Machine Learning Lunch Seminar. Carnegie Mellon University, October 2015.</p>	
TEACHING	<p><i>Probabilistic Graphical Models</i> (Teaching Assistant)</p> <p><i>Introduction to Machine Learning</i> (Teaching Assistant)</p>	<p>Spring 2016</p> <p>Fall 2015</p>
ACTIVITIES AND PROFESSIONAL SERVICE	<p><i>Pennsylvania Junior Academy of Science</i> February 2015</p> <p>Middle school science fair judge.</p> <p><i>ML Department Masters Admissions Committee</i> January 2015</p> <p>Reviewed application materials of prospective Masters students.</p> <p><i>Machine Learning Department Student Research Symposium</i> November 2014</p> <p>Member of organizing committee. Helped plan symposium and created website.</p> <p><i>CMU Language Technologies Institute Research Colloquium</i> 2013 - 2014</p> <p>Helped organize weekly research seminar as member of student planning committee.</p> <p><i>English Language Institute Conversation Circle Program</i> 2011 - 2013</p> <p>Group leader of conversation circle for ESL students at University of Michigan.</p> <p><i>University of Michigan Robocup (Robot Soccer) Team</i> 2009 - 2012</p> <p>Member and team leader (2010-2011). Developed computer vision subsystem.</p>	
RELEVANT CLASSES	<p>Machine Learning, Probabilistic Graphical Models, Convex Optimization, Statistical Machine Learning, Hidden Markov Models, Foundations of Machine Learning Theory, Numerical Methods, Linear Algebra, Theoretical Statistics</p>	
PROGRAMMING	<p>Python, Matlab, C++, C, CUDA, Java, Shell scripting, L^AT_EX, SQL</p>	
OPEN-SOURCE SOFTWARE	<p>MegaCGGM</p> <p>Fast and scalable methods for estimating sparse conditional Gaussian graphical models.</p> <p>https://github.com/calvinmccarter/mega-cggm</p>	