America L. Chambers (Née Holloway)

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Education

2007 - Present	**Ph.D. Student, Machine Learning**, University of California, Irvine	**3.97 GPA**
2010	**MS in Computer Science**, University of California, Irvine	**3.97 GPA**
2001 - 2005	**BA in Mathematics,** Swarthmore College	**3.55 GPA**
2001 - 2005	**BA in Computer Science,** Swarthmore College	**3.55 GPA**

Publications and Posters

To appear	T. Rubin, A. Chambers, P. Smyth, M. Steyvers. Statistical topic models for multi-label document classification. To appear in *Machine Learning Journal*.
2010	A. Chambers. Learning concept graphs from text with stick-breaking priors. *Advances in Neural Information Processing Systems*, 2010.
2009	A. Chambers, M. Steyvers and P. Smyth. Learning a statistical model of Wikipedia, *Machine Learning Summer School*, Cambridge, UK, 2009. **(Poster)**
2008	C. Chemudugunta, A. Holloway, P. Smyth and M. Steyvers. Modeling documents by combining semantic concepts with unsupervised statistical learning. *Intl. Semantic Web Conf. (ISWC)*, LNCS 5318, Springer, 2008, pp. 229-244.
2007	A. Holloway and T.-Y. Chen, Neural networks for predicting the behavior of preconditioned iterative solvers, In *Proc. of the 26th Int'l. Conf. Comput'l. Science (ICCS),* LNCS 4487, Springer, 2007, pp. 302-309.
	A. Hollway and T.-Y. Chen, Using supervised machine learning techniques to understand preconditioner behavior, *SIAM Conf. Comput'l Science and Eng.*, Feb, 2007. **(Poster)**
2005	J. Barry, A. Holloway, H. Jones and T. Newhall, Reliability for Nswap, *10thAnnual Consortium for CS in Colleges Northeastern Conf.*, RI, Apr., 2005. **(Poster)**

Research/Work Experience

Summer 2011	**Google Internship,** Irvine, California
	* Worked to improve performance of classifiers to classify help emails into taxonomy of issues. Experimented with a wide variety of supervised classifiers.
	* Developed method to automatically identify groups of hard-to-classify issues in the taxonomy.
	* Taught myself C++ (including use of the stl), Perforce
2009 – 2010	**Graduate Research Assistant**, University of California, Irvine
	* Developed and implemented (in C programming language) a Bayesian non-parametric approach to learning concept maps from text using stick-breaking priors. Work appears in NIPS paper.
	* Designed a graphical model for multi-labeled document classification to "fit" current inference procedure.
	* Implemented SVM baseline methods for multi-label document classification.
	* Supervised by Padhraic Smyth
2008 – 2009	**Graduate Research Assistant**, University of California, Irvine
	* Explored and implemented Bayesian approaches for adding new categories to Wikipedia category graph.
	* Supervised by Padhraic Smyth
2006 – 2007	**Research Assistant**, Pomona College
	* Applied neural networks to the task of learning optimal preconditioners for systems of linear equations.
	* Supervised by Tzu-Yi Chen
2004 – 2005	**Undergraduate Research Assistant**, Swarthmore College
	* Developed and implemented reliability scheme for network-swapping enabled Linux clusters
	* Supervised by Tia Newhall

Programming Languages

Proficient	C, Matlab
Workable	Perl, C++
Basic	Java

Teaching Experience

2005 – 2006 **Middle School Mathematics Teacher**, Cesar Chavez Academy

* Developed lesson plans, lectures, and exams for 7th grade Pre-Algebra, 6th grade basic math and Russian elective.

2005 - 2006 **High School Mathematics Teacher**, Dolores Huerta Preparatory High

* Developed lesson plans, lectures and exams for high-school Geometry and Algebra II courses.

2002-2004 **Unix/C Teaching Assistant**, Swarthmore College

* Tutored students on using Linux and the syntax, semantics and style of programming in C.

Projects

2008 **Using Agent Belief to Model Stock Returns**

* Developed and implemented model of stock returns that combined social network herding model with ARCH model.

* Final project for Research Projects in ML taught by Alex Ihler and Max Welling

2008 **Modeling Photon Emissions**

* Implemented IRLS, EM and MCMC methods to find MLE/MAP estimates for two Poisson models of astronomy data.

* Final project for Statistical Computation course taught by David Van Dyke

2007 **Augmenting Classifiers with Domain Knowledge: A Comparative Study**

* Implemented three supervised classifiers that incorporate domain knowledge in the form of logical statements. Applied to the task of learning splice junctions in DNA sequences.

* Final project for Machine Learning course taught by Deva Ramanan

Awards

2009 Microsoft Research Graduate Women's Scholarship

2004 - 2005 Research grant by Collaborative Research Experience for Undergraduates (CREU) in CS and Engineering

2003 - Present Mellon Mays Undergraduate Fellowship, Swarthmore College