Wesley Tansey

wes.tansey@gmail.com

http://cs.utexas.edu/~tansey

(804)-867-5306

5207 Wayborne Hill Dr., Austin, TX

Research Statement

I'm a Computer Science PhD student at UT Austin. My main research interests are health and wellness applications of machine learning, particularly those involving graphical models, Bayesian statistical methods, and scalable inference algorithms. My current projects include obesity and nutrition modeling, wearable devices for fitness tracking, and large-scale multiple hypothesis testing for fMRI and allele frequency studies. I am passionate about taking my research into the real world and currently am collaborating with several tech startups to help improve the lives of their users.

Education

2011–Present	**Pursuing PhD in Computer Science, University of Texas at Austin**
	Graduate Coursework:
	Graphical Models, Neural Networks, Bayesian Statistical Methods,,
	Natural Language Processing, Reinforcement Learning, Statistical Modeling II,
	MCMC Methods, Mathematical Logic, Computer Security, Programming Languages
2006-2008	**MS in Computer Science, Virginia Tech**
	GPA 3.81
2003-2006	**BS in Computer Science, Virginia Tech**
	GPA 3.55

Select Publications

2012	W. Tansey, E. Feasley, and R. Miikkulainen. Accelerating evolution via egalitarian social learning. In *Proceedings of the Fourteenth International Conference on Genetic and Evolutionary Computation Conference (GECCO 2012)*, pages 919–926. ACM, 2012
2012	R. Miikkulainen, E. Feasley, L. Johnson, I. Karpov, P. Rajagopalan, A. Rawal, and W. Tansey. Multiagent learning through neuroevolution. *Advances in Computational Intelligence*, pages 24–46, 2012
2008	W. Tansey and E. Tilevich. Annotation refactoring: inferring upgrade transformations for legacy applications. In *Proceedings of the 23rd ACM SIGPLAN Conference on Object-Oriented Programming Systems, Languages, and Applications (OOPSLA 2008)*, volume 43, pages 295–312. ACM, 2008
2008	W. Tansey and E. Tilevich. Efficient automated marshaling of C++ data structures for MPI applications. In *Proceedings of the 2008 IEEE International Symposium on Parallel and Distributed Processing (IPDPS 2008)*, pages 1–12. IEEE, 2008

Work Experience

Currently	**PhD Student, UT Austin** Co-advised by Carlos Carvalho, James G. Scott, and Pradeep Ravikumar. Focused on high-dimensional inference problems in graphical models.
2014	**Data Science Intern, MyFitnessPal** Statistical modeling of millions of nutritional diaries. Created large-scale inference experiments to predict user weight-loss.
2013	**Software Engineering Intern, Google** Researched how to improve automated auction bidding. Implemented and evaluated alternative bidding strategy experiments on massive datasets.
2011-2014	**Teaching Assistant, Computer Science Department, UT Austin** Participated in developing course materials for hundreds of students. Helped setup up competition for AI MOOC class taught by Peter Norvig. Directly managed team of four undergrad researchers.
2011-2012	**Co-founder, Curvio Inc.** Built, launched, and iterated a consumer web startup. Organically grew site to 2k uniques/day. Managed a team of 12 remote contractors and hundreds of turkers.
2010	**Co-founder, EffectCheck (Effect Technologies Inc.)** Created novel machine learning algorithms for sentiment analysis. Worked all areas of the business: front-end, back-end, sales, partnerships, and marketing.
2010-2011	**Machine Learning Contractor, Natural Selection Financial** Researched adaptive machine learning models for quantitative finance. Developed algorithms that explore huge data sets and discover exploitable patterns in market prices.
2008-2010	**Research Associate, Lincoln Vale Adaptive Strategies (Hedge Fund)** Researched and implemented machine learning algorithms for automated trading. Developed 20+ real-world trading algorithms, with millions of dollars wagered on their predictions every day.

Skills

Python, Ruby, R, C#, C/C++, Java, HTML, CSS, and Javascript
Technical writing, team leadership, startups, statistical modeling
Building systems to collect, clean, analyze, and learn from data

Awards and Miscellanea

Recipient of NSF Beacon Grant
NSF Graduate Research Fellowship Program, Honorable Mention in Machine Learning
Outstanding Graduate Student Award, Virginia Tech
Finished the San Diego Rock'n'Rock Marathon in 5:38:11
Projects available on my website: http://cs.utexas.edu/~tansey