Wesley Tansey

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Education

2011–Present	**PhD candidate in Computer Science, University of Texas at Austin**
2006-2008	**MS in Computer Science, Virginia Tech**
2003-2006	**BS in Computer Science, Virginia Tech**

Publications

2017 **Tansey, W.**, O. Koyejo, R. Poldrack, and J. Scott. False discovery rate smoothing. *Accepted to the Journal of the American Statistical Association: Theory and Methods*, 2017

2017 **Tansey, W.**, A. Athey, A. Reinhart, and J. G. Scott. Multiscale spatial density smoothing: an application to large-scale radiological survey and anomaly detection. *Accepted to the Journal of the American Statistical Association: Applications and Case Studies*, 2016a

2016 **Tansey, W.**, E. W. Lowe, and J. G. Scott. Diet2vec: Multi-scale analysis of massive dietary data. In *Proceedings of the 2016 NIPS Workshop on Machine Learning for Health*, 2016b

2015 **Tansey, W.**, O.-H. Madrid-Padilla, A. Suggala, and P. Ravikumar. Vector-space markov random fields via exponential families. In *Proceedings of the 32nd International Conference on Machine Learning (ICML'15)*, 2015

2012 R. Miikkulainen, E. Feasley, L. Johnson, I. Karpov, P. Rajagopalan, A. Rawal, and **Tansey, W.** Multiagent learning through neuroevolution. *Advances in Computational Intelligence*, pages 24–46, 2012

2012 **Tansey, W.**, 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

2009 M. Song, E. Tilevich, and **Tansey, W.** Trailblazer: a tool for automated annotation refactoring. In *Proceedings of the 24th ACM SIGPLAN conference companion on Object oriented programming systems languages and applications (OOPSLA 2009)*, pages 813–814. ACM, 2009

2008 **Tansey, W.** 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, 2008b

2008 **Tansey, W.** 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, 2008a

2008 S. Gopal, **Tansey, W.**, G. Kannan, and E. Tilevich. Dexter: An extensible framework for declarative parameter passing in distributed object systems. In *Proceedings of the 9th ACM/IFIP/USENIX International Conference on Middleware*, pages 144–163. Springer-Verlag New York, Inc., 2008

Presentations and Talks

"Diet2Vec: Multi-scale Analysis of Massive Dietary Data"; NIPS Workshop on Machine Learning for Health (poster); Barcelona, Spain; 2016

"False Discovery Rate Smoothing"; Joint Statistical Meetings; Seattle, WA; 2015

"Vector-space MRFs via Exponential Families"; The 32nd International Conference on Machine Learning; Lille, France; 2015

"False Discovery Rate Smoothing"; ISBA Nonparametric Bayes; Raleigh, NC; 2015

"Accelerating Evolution via Egalitarian Social Learning"; International Conference on Genetic and Evolutionary Computation Conference; Philadelphia, PA; 2012

"Annotation Refactoring: Inferring Upgrade Transformations for Legacy Applications"; 24th ACM SIGPLAN Conference on Object Oriented Programming Systems, Languages, and Applications; Nashville, TN; 2009

"Efficient Automated Marshaling of C++ Data Structures for MPI Applications"; IEEE International Symposium on Parallel and Distributed Processing; Miami, FL; 2008

Experience

Currently — **PhD Candidate, UT Austin**
Advisor: Prof. James G. Scott.
Focused on high-dimensional inference problems in machine learning.

2016 — **Visiting Researcher, Duke University**
Supervisor: Prof. Lawerence Carin
Investigated scalable Bayesian methods

2015 — **Visiting Researcher, Stanford University**
Supervisor: Prof. Russell Poldrack
Worked on large-scale multiple hypothesis testing techniques for fMRI data.

2014 — **Data Science Intern, MyFitnessPal**
Statistical modeling of millions of nutritional diaries.
Created large-scale inference experiments to predict user weight-loss success.

2013-2014 — **Machine Learning Consultant, Atlas Wearables**
Designed initial exercise recognition algorithm for a new smart watch.
Brought a working product to market with excellent recognition performance in the real world.

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.

Awards and Miscellanea

2x Recipient of the Garg Fellowship for Research with Real-World Impact

Recipient of NSF Beacon Grant

NSF Graduate Research Fellowship Program, Honorable Mention in Machine Learning

Outstanding Graduate Student Award, Virginia Tech

Projects available on my website: `http://cs.utexas.edu/~tansey`