Dustin E. Stansbury, PhD

dustin.stansbury@gmail.com | dustinstansbury.net | theclevermachine.wordpress.com | (828) 406-1698

Profile

Data scientist with strong quantitative background and experience in music retrieval, analytics, statistics, machine learning, and cognitive and behavioral sciences. Multi-instrumental musician. Passionate about using data and quantitative methods to more effectively spread the gift of music to others.

Education

PhD Vision Science, University of California, Berkeley, 2014.

Focus: Computational Neuroscience & Machine Learning

Supplemental Education, University of North Carolina, Asheville, 2007.

Focus: Statistics & Computer Science

BS Physics & Psychology, Appalachian State University, 2005.

Minor: Applied Mathematics
Honors: *Cum Laude, Department Honors in Physcis & Psychology*

Relevant Work Experience

Principal Data Scientist, 8tracks, 2014-Present.

Projects:

Predictive Analytics
Designed and implemented company-wide predictive analytics platform used for multiple product development projects and UX research.

Website Optimization
Designed and implemented interactive site optimization experiment framework, including A/B/n and Bayesian hypothesis tests for Binomial, Poisson, and Gaussian variables; devised and ran multiple site optimization experiments using this framework.

Music Recommendation Systems
Developed, implemented, and maintained recommendation systems used for large-scale, real-time, personalized music programming.

Data Engineering
Implemented system for auditing and cleaning/denoising large database tables of text metadata used in production.

Tools & Skills Used:

Programming Languages
Python, Ruby, C++, BASH, HTML/CSS, Javascript, CUDA.

Packages & APIs
MySQL, Redshift/Postgres, Apache-Spark, Pandas, scikits-learn, Theano, Redis, D3.js, NVD3.

Skills
Statistics, machine learning, predictive modeling, experiment design, neural networks/deep learning, natural language processing, signal processing, manipulating large datasets (1B+ records).

Academic Research Scientist & Lecturer, UC Berkeley, 2007-2014.

Projects:

Perceptual Neuroscience Research
Used predictive modeling and machine learning in conjunction with massive neuroimaging and neurophysiology datasets to develop and test theories of visual and auditory processing in the brain.

Theoretical Neuroscience Research
Applied concepts adapted from statistical learning and information theory to identify and verify analogs between aritficial and biological neural networks.

Lecturer, Computational Models of Cognition
Instructed lectures and labs focusing on computational models of brain function and behavior. Course content included theory and application of formal logic, Bayesian networks, and artificial neural networks/deep learning.

Tools & Skills Used:

Programming Languages
MATLAB, Julia, Python, C++, Java, BASH, R, CUDA.

Packages & APIs
MySQL, CouchDB, SLURM.

Skills
Experiment design, hypothesis testing, predictive modeling, statistical learning theory, information theory, neural networks/deep learning, natural language processing, signal processing, neuroimaging (fMRI).

Projects & Professional Activities

***Getting Started With Julia*, 2015**
Content editor for a textbook focusing on using the Julia programming language for data science.

The Clever Machine, 2013-Present
Author of an educational blog focusing on machine learning and computational neuroscience.

MATLAB Environment for Deep Architecture Learning (MEDAL), 2012-Present
Principle developer of a MATLAB toolbox for training deep machine learning models on large data sets.

Supplemental Education
Attendee, UCLA Institute for Pure & Applied Mathematics Summer School on:

Deep Learning & Feature Learning, 2012.

Probabilistic Models of Cognition, 2011.