coryschillaci

machine learning, analytics, and big data

contact

schillaci@berkeley.edu

+1 (206) 930-9189

1968 Marin Avenue
Berkeley, CA 94707

programming

Python, C/C++, Scala, Mathematica, Julia, Matlab

scikit-learn, Spark, MLlib, BIDMach, MapReduce, git

selected skills

data analysis
machine learning
sci. programming

education

August 2015 **PhD,** Physics (Haxton Group) — The University of California, Berkeley
Thesis Title: Effective Interactions for Few-Body Physics.
- Analytical simplification of three-body interactions in atomic nuclei
- Numerically determined spectra of exotic interactions in Bose-Einstein condensates using C++ and Mathematica

June 2009 **Bachelor of Science,** Physics (Reinhardt Group) — The University of Washington
Magna cum laude with honors. Minors in mathematics and chemistry.
- Built software in C with OpenMP and MPI to simulate dynamics of Bose-Einstein condensates using large-scale parallel computing resources.

publications

Energy spectra of two interacting fermions with spin-orbit coupling in a harmonic trap
Cory D. Schillaci, Thomas C. Luu. Phys. Rev. A *91 (2015) p. 043606*

Schrödinger Cats in Double Well Bose Condensates: Modeling Their Collapse and Detection via Quantum State Diffusion
William P Reinhardt, Cynthia A Stanich, Cory D Schillaci. Applied Mathematics And Information Sciences *3.3 (2009) pp. 273–299*

coursework

Spring 2014 **CS 289A: Introduction to Machine Learning** — UC Berkeley
Theory and practice of classification and regression. Python implementation of models including logistic regression, random forests, neural networks, and boosting methods for classification of MNIST handwritten digits.

Spring 2014 **Info 290T: Data Mining** — UC Berkeley
Practical aspects of data workflow including cleaning, ETL pipelines, distributed computing, modeling, and visualization. Taught by an industry professional.

Fall 2014 **CS 281A: Statistical Learning Theory** — UC Berkeley
Theoretical foundations of machine learning including detection and estimation theory, batch and incremental optimization, graphical models, exponential families.

Jan. 2015 **Distributed Analytics & ML with Apache Spark** — Berkeley Institute for Data Science
Apache Spark and MLlib for distributed analysis of large data sets including click-through rate predictions and log analysis.

projects

2014 **Enhancing Wind Forecasts with Machine Learning**
Worked with Sail Tactics, LLC to apply machine learning to improve their forecast product.
- Improved RMSE of wind speed predictions by 20%.

2015 **Sentiment Analysis and Stress Management (LiveJournal Posts)**
Working with Prof. John Canny to analyze sentiments and identify stress predictors from blog text.
- Experience with basic NLP pipeline including parsing using flex, building features with word2vec, etc for over 80 million posts.