Jonathan Whitmore
PhD, Data Scientist

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Experience

2014-Present — **Data Scientist**, *Silicon Valley Data Science*, Mountain View, CA, USA.
- Consulting as a member of several small data science/data engineering teams at multiple companies.
- Creating output to explain data analysis, data visualization, and statistical modeling results to managers.
- Modeling survey data responses with ordinal logistic regression in R.
- Analyzing and visualizing user behavior migration.

2014 — **Insight Fellow**, *Insight Data Science*, Palo Alto, CA, USA.
- Created a Data Science project to predict the auction sale price of Abstract Expressionist art.

2011–2014 — **Postdoctoral Research Associate**, *Swinburne University*, Melbourne, AUS.
- Cleaned noisy and inhomogeneous astronomical data taken over four years by different observing groups.
- Curated central data repository of final products; developed an automated process to update data repository; created web interface for collaborator access to the repository.
- Utilized numerous statistical techniques, including sensitivity analysis on non-linear propagation of errors, Markov-Chain Monte Carlo for model building, and hypothesis testing via information criterion.
- Simulated spectroscopic data to expose systematic errors that challenge long-standing results on whether the fundamental physical constants of the universe are constant.

2005–2011 — **Graduate Student Researcher**, *UCSD*, San Diego, CA, USA.
- Developed a novel technique to extract information from high resolution spectroscopic data that led to uncovering unknown short-range systematic errors.

Programming and Development Skills

Languages — Python, SQL (Impala/Hive), R, LaTeX, shell scripts, CSS, HTML.

Tools — Jupyter Notebook, pandas, matplotlib, numpy, scikit-learn, scipy, pymc3, git, pandoc.

Publishing, Speaking, and Side Projects

2016 — O'Reilly author: Jupyter Notebook for Data Science Teams [screencast], editor O'Reilly Media.

2016 — UC Berkeley Guest Lecturer: Master in Data Science lecture on Jupyter Notebook.

2015 — Open Source Speaker: OSCON.

2014–2015 — Technical reviewer of *Mastering SciPy* by Francisco J. Blanco-Silva, 2015.

2012–2014 — Developer of RebalanceAssetAllocation, a Python module that recommends financial asset class allocations.

2013-2014 — Contributor to astropy; creator of dipole_error, an astronomy Python module.

2013 — Co-star and narrator of Hidden Universe, a 3D IMAX astronomy film playing worldwide.

2007–2009 — Graduate Physics Courses Taken: Stochastic Methods, Computational Physics.

Education

2011 — **PhD Physics**, *University of California San Diego*, San Diego, CA, USA.

2007 — **MS Physics**, *University of California San Diego*, San Diego, CA, USA.

2005 — **Bachelor of Science–Magna Cum Laude**, *Vanderbilt University*, Nashville, TN, USA.
Triple major: Physics (honors); Mathematics; Philosophy.