

Neil Miller

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WORK EXPERIENCE

- Insurance Analytics Intern** - AAA Insurance Exchange Aug 2012 – Dec 2012
Product and Data Analytics Group (using SAS, SQL, Excel)
- Queried and processed transactional policy data with SAS/SQL and visualized with Excel
 - Optimized home inspection procedure to save AAA 250K annually
 - Quantified current CA auto retention for ongoing system transition
- Grad Student Research** – UC Santa Cruz Sept 2006 – Dec 2012
- Astronomy Teaching Assistant** – UC Santa Cruz Sept 2006 – June 2008
- High School Student Tutor** Summer 2005 – Summer 2006
- Computer Science Teaching Assistant (CS 1)** – Caltech Fall 2007, Fall 2008

EDUCATION

University of California, Santa Cruz

- Ph.D. / M.S., Astronomy and Astrophysics Dec 2012
- Coursework: Accounting, Probability, Mathematical Statistics, Fluid Dynamics, Dynamical Astronomy, Numerical Technique, Physics of Astrophysics, Stars, Galaxies, Planetary Science
- Developed Physics-based models to model giant planet structure and evolution using IDL, Fortran, Python, Ruby, Matlab, and R
 - Utilized statistical techniques, such as linear correlation and Monte-Carlo to measure trends and test models
 - Object oriented, open-source software development

California Institute of Technology

- B.S., Mathematics June 2006
- Coursework: Investment Analysis, Options, Auctions, Probability, Stochastic Differential Equations with Applications to Finance, Political Science (game theory), Classical and Real Analysis, Discrete Mathematics, Computer Science, Physics

COMPUTER SKILLS

- C++, R, Fortran, IDL, Python, Scheme, Maple, Java, Ruby, SAS, SQL, Excel, Matlab

PUBLICATIONS

- Miller, Fortney and Jackson. “*Inflating and Deflating Hot Jupiters: Coupled Tidal and Thermal Evolution of Known Transiting Planets,*” ApJ 2009.
- Li, Miller, Lin, and Fortney. “*WASP-12b as a prolate, inflated and disrupting planet from tidal dissipation,*” Nature 2010.
- Miller and Fortney. “*The Heavy-element Masses of Extrasolar Giant Planets, Revealed,*” ApJ 2011.

VOLUNTEER & COMMUNITY ACTIVITIES

- Graduate Student Commons Board Member (4 years) – Advise and assist in social and professional activities for UCSC graduate students, Budget and Finance Committee
- Graduate Student Association Representative for Astronomy Department (1 year) – debated and voted on graduate student community issues
- Organizing Caltech Bay area alumni activities
- Eagle Scout