**EDUCATION**

**The University of Texas at Austin**, Austin, TX August 2011 - May2016

5 years of graduate training

**The University of Illinois at Urbana-Champaign**, Urbana, IL December 2010

*Bachelor of Science in Astronomy*

**EXPERIENCE (in reverse chronological order)**

*Research*

**The University of Texas at Austin**, Austin, TX August 2011 – May 2016

*Graduate Research Assistant*

* Developed a Python routine to perform a Markov Chain Monte Carlo (MCMC) analysis on observational data of 9-parameter eclipsing binary star systems to find the best-fit orbital parameters and presented the results at a meeting of the American Astronomical Society (AAS) as well as a seminar at UT.
* Developed a Python implementation of the TODCOR algorithm, a two-dimensional cross-correlation algorithm used to measure the radial velocity of stars in a binary system, and presented the results of using the algorithm on several star systems at AAS and Cool Stars conferences as well as a seminar at UT.
* Developed a Python/bash algorithm to perform real-time imaging analysis of data taken from the 0.8-m telescope at McDonald Observatory to find and measure stellar eclipses and presented the results in a seminar at UT.
* Integrated a variety of imaging data from many different sources into one comprehensive database to allow for easier computational analysis.
* Collected imaging data using the 0.8-m, 2.1-m Otto Struve, and 2.7-m Harlan J. Smith telescopes at McDonald Observatory as well as the LCOGT network of telescopes for use in my research.
* Wrote 3 successful proposals for telescope time on the LCOGT network of telescopes and the 2.7-m Harlan J. Smith telescope at McDonald Observatory.

**University of Illinois at Urbana-Champaign,** Urbana, IL September 2009 - May 2011

*Undergraduate Research Assistant*

* Used bash/IRAF scripts to compare the images of stars across multiple photometric bands observed over several decades to match stars with their counterparts in the other images.
* Developed Python code to query a stellar database based on user input and return requested information.

*Teaching*

**The University of Texas at Austin**, Austin, TX August 2011 – May 2016

*Teaching Assistant*

* 7 semesters as a teaching assistant for lower and upper level undergraduate astronomy classes.
* Planned and led a discussion section.
* Reviewed and graded homework and test questions.
* Wrote and taught the content for a lecture to an undergraduate astronomy class.
* Held office hours to help students with course content.

**University of Illinois at Urbana-Champaign,** Urbana, IL January 2011 - May 2011

*Teaching Assistant*

* Graded assignments.
* Held office hours to help students with course content.

**PROJECTS**

* Wrote C++ program to run the inventory of a record store as a class project.
* Wrote Python code to interface new components of the gaming software *Magic Workstation* with the existing program.

**SKILLS**

**Programming:** Python (advanced), C++ (intermediate), shell/bash, awk)

**Databases and Web Design/Development:** Java (beginner), HTML/CSS (beginner), Ruby (beginner), MySQL (beginner), Git

**Data Analysis**: Bayesian inference (MCMC), image processing, cross-correlations (1D and 2D)

**Presentation Software:** Excel, Powerpoint, Word, LaTeX

**Operating Systems:** Mac OS X, Linux, Windows

**Oral Presentations:** Gave 6 research presentations to members of the UT astronomy department.

**Writing:** Wrote 3 successful proposals to receive observing time on the 2.7-m HJS Telescope at McDonald Observatory and the LCOGT network of telescopes.

**HONORS AND AWARDS**

* [Chambliss Astronomical Achievement Award](https://aas.org/grants-and-prizes/chambliss-astronomy-achievement-student-awards) for my poster presentation at the 227th meeting of the AAS in Kissimmee, FL in 2016.
* James Scholar at University of Illinois at Urbana-Champaign
* Dean's List: Fall 2007, Spring 2008, Spring 2009, Spring 2010
* Cum Laude with High Distinction in Astronomy, University of Illinois at Urbana-Champaign