

Emily Quinn Finney

Data Experience

- 2015-2017 **Graduate Research Associate** Davis, CA
University of California, Davis
- Trained high-dimensional models of galaxy cluster structure using MCMC and gradient descent algorithms.
 - Extracted wavelength information and other properties from imaging data.
 - Wrote a peer-reviewed journal article detailing results.
 - Provided extensive mentoring in astrophysics research practices.
- 2013 **Undergraduate Senior Thesis** Claremont, CA
Scripps College
- Implemented Bayesian methods to improve models of galaxy cluster mergers.
 - Inferred galaxy cluster collision parameters by analyzing radio data.
 - Visualized data and communicated findings in a paper.
 - Selected to present research at Scripps College Capstone Day.
- 2013 **Astronomy Research Internship** La Serena, Chile
Cerro Tololo Inter-American Observatory
- Cleaned gigabytes of astronomical data using bash scripting and Skycat image software.
 - Classified spectral data and fit lines to redshifts.
- 2012 **Physics Research Internship** Davis, CA
University of California, Davis
- Conducted hypothesis testing on a set of galaxy ellipticity data.

Teaching Experience

- 2014-2016 **Physics Teaching Assistant** Davis, CA
University of California, Davis
- Taught physics discussion/labs for 40-60 students each academic quarter.
 - Responsible for weekly office hours, grading, and proctoring exams.
- 2012-2014 **Physics and Computer Science Tutor/Grader** Claremont, CA
Scripps College; Harvey Mudd College
- One-on-one tutoring in physics and computer science concepts.
- Summers **Camp Director** Davis, CA; Reno, NV; Plymouth, MA
The Peregrine School; Great Basin Institute; Camp Clark YMCA
- Designed and implemented physics, ecology, and computer programming oriented curricula for students ages 4-16.

Education

- 2014-2017 **Master's of Science, Physics** Davis, CA
University of California, Davis
- 2010-2014 **Bachelor's of Arts, Physics** Claremont, CA
Scripps College

Other Skills and Interests

- Professional** Machine learning, tidy data, image analysis, data-driven education.
Personal Hiking, child development, spiders, Christianity.

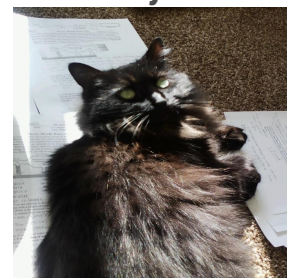
Software

Python
NumPy
SciPy
Pandas
matplotlib
Unix/Linux
bash scripting
Git
Software Design
OOP
C data types
R
tidyverse enthusiast
Other Languages
Java
MATLAB
SQL
L^AT_EX

Practical Statistics

Bayesian Methods
Bayes' Theorem
MCMC
Statistical Inference
Random variables
Hypothesis testing
Regression
Experimental design
Machine Learning
Gradient descent
Clustering algorithms
Mathematics
Linear algebra
Multivariate calculus

This is my cat.



She likes R too.

Contact

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