Jared Brooks, PhD

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Education

2012-2017:
PhD program in Physics - UC Santa Barbara

- PhD: Physics — September 2017
- Master of Arts: Physics — March 2015
- Broida Fellowship — September 2012

2007-2011:
BSc in Physics - University of Southern California

- Minor in Mathematics
- Lick Scholarship - 2010

Work Experience

Kavli Institute for Theoretical Physics (Summer 2012):

I worked for the KITP writing documenatation for the MESA test suite.

MESA is the stellar modeling software I went on to use for my PhD dissertation.

University Physics Teaching Assistant (Oct 2012 - June 2014):

I worked for UC Santa Barbara as a teaching assistant for upper and lower division physics and astrophysics classes.

I lead discussion sections, held office hours, wrote solution sets, and graded homeworks and exams. These experiences helped me gain communication and leadership skills

MESA Summer School Teaching Assistant (Summers of 2012-2017):

Once a year, starting in 2012, we invited graduate students and post-docs from all around the world to enroll in a week long course of lectures and lab-exercises.

As a TA I prepared and tested the labs and helped participants by providing advice, debugging help, and explanations of results.

Graduate Student Researcher (2013-2017):

I produced six first-author and three coauthored publications in The Astrophysical Journal.

My Astrophysics research at UC Santa Barbara focused on using 1D stellar modeling software (MESA) to carry out simulations of white dwarf + helium star binaries engaged in mass transfer. I collaborated with scientists at Caltech, UC Berkeley, UC Santa Cruz, and Bonn University.

Data Science Project (2018):

Looking to start a career in data science, I learned some data science skills and decided to try out my new skills on a project. My idea was to study the data available online about podcasts.

I scraped podcast rss feeds and extracted out the guests, dates, and durations, analyzed the data, and built an interactive website to display and explore the data. Please check it out at sixdegreestojoerogan.com

Skills

Programming:
Python (Scikit-Learn, Pandas, Matplotlib, ...), R, LaTeX, SQL, AWS, TensorFlow, Tableau, git/github, HTML/CSS/Javascript, Fortran, Ruby, C++

Data Science:
Machine Learning (SVM, MLP, RF, Boosting), Data cleaning, Data analysis, Probability & Statistics, AB testing, Data visualization, Regression, Text mining, NLP