Jared Brooks, PhD

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EDUCATION

UC Santa Barbara

- Ph.D. in Physics — Mar 2015 – Sep 2017
- Master of Arts: Physics — Sep 2012 – Mar 2015
- Broida Fellowship — Sep 2012

University of Southern California

- BSc in Physics — Aug 2007 – May 2011
- Minor in Mathematics
- USC Associates Scholarship, Cal Space Grant UROP, Lick Scholarship

RELEVANT EXPERIENCE

Data Science Project

- Display of relevant and applicable skills at www.sixdegreestojoerogan.com — Apr 2018 – Jun 2018
  - Preparation: 5 courses on Data Science in Python, 9 courses on Data Science in R, 1 course on Social and Economic Network Theory on Coursera.org
  - Data Acquisition: scraped podcast rss feeds and extracted out the guests, dates, and durations, cleaned and homogenized many different guest-list formats
  - Data Analysis: Used Python (pandas, numpy, networkx, datetime, scikit-learn) to analyze and structure data, understand and formalize network structures, and used machine learning to predict future guests
  - Data Visualization: Learned Django for writing web-app, and Amazon Web Services (AWS) to launch the website, used Plotly for interactive figures

UC Santa Barbara Dept. of Physics

- Graduate Student Researcher — Jun 2013 – Sep 2017
  - Produced six first-author and three coauthored publications in The Astrophysical Journal
  - Focused on using 1D stellar modeling software (MESA) to carry out simulations of white dwarf + helium star binaries engaged in mass transfer
  - Collaborated with scientists at Caltech, UC Berkeley, UC Santa Cruz, and Bonn University

MESA Summer School

- Teaching Assistant — Aug 2012 – Aug 2017
  - Annual week long course of lectures and lab-exercises for graduate students, post-docs, and faculty from all around the world
  - Prepared and tested the labs and helped participants by providing advice, debugging help, and explanations of results

UC Santa Barbara

- University Physics Teaching Assistant — Oct 2012 – Jun 2014
  - TA for upper and lower division physics and astrophysics classes, from dozens to hundreds of students per class
  - Lead discussion sections, held office hours, wrote solution sets, and graded homeworks and exams
  - Learned valuable communication and leadership skills

Kavli Institute for Theoretical Physics

- Research Scientist — May 2012 – Sep 2012
  - Wrote documentation for the MESA test suite
  - MESA is the stellar modeling software used for my PhD dissertation

SKILLS

Programming:
Python (Scikit-Learn, Pandas, Matplotlib, ...), R, LaTeX, SQL, AWS, 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

INTERESTS

Guitar and singing, backpacking, non-fiction books, sci-fi tv and movies, podcasts