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

University of Southern California

- BSc in Physics, Minor in Mathematics   Aug 2007 – May 2011

RELEVANT EXPERIENCE

Insight Data Science

- Data Science Fellow   Jan 2019 – Present
  - Developed Python-based web application to help investors pick new cryptocurrencies that would lower the volatility and risk of their portfolios
  - Implemented a machine learning algorithm to discover the appropriate weights for statistical measures of performance that are predictive of lowered future volatility
  - Deployed an interactive web-app on AWS using Python, Flask, HTML and CSS

Six Degrees to Joe Rogan

- Creater/Owner of web app (www.sixdegreestojoerogan.com)   Apr 2018 – Jun 2018
  - Enhanced discoverability of new podcasts based on guest lists
  - Provided organized and easily searchable database of podcast guests of over 160 podcasts by web scraping and data munging/cleaning using Python
  - Included in-depth analysis of network structure to provide insights on who are the most central and influential podcasts and guests

UC Santa Barbara Dept. of Physics

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

MESA Summer School

- Teaching Assistant   Aug 2012 – Aug 2017
  - Supervised 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 in advance of program
  - Provided advice, debugging help, and explanations of results for participants

UC Santa Barbara

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

Kavli Institute for Theoretical Physics

- Research Scientist   May 2012 – Sep 2012
  - Documented the MESA test suite
  - Increased the usability and understandability of complicated modeling tool
  - Centralized knowledge of capabilities of MESA (stellar modeling software used for my PhD dissertation)

SKILLS

Programming:
Python (Scikit-Learn, Pandas, Matplotlib, ...), R, LaTeX, SQL, AWS, git/github, Flask, Django, Plotly, HTML/CSS

Data Science:
Machine Learning, Statistical analysis, Data visualization, Web Scraping/APIs