

Jared Brooks, PhD

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SKILLS

Programming:

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

Data Science:

Machine Learning (Log. Regression, MLP),
Statistics, Network Analysis,
Data visualization, Web Scraping/APIs

RELEVANT EXPERIENCE

Data Science Fellow – Insight Data Science

Jan 2019 – May 2019

- Developed **Python**-based web app based on key metrics of cryptocurrency investments, focused on lowering volatility of portfolios
- Implemented a **machine learning** algorithm to understand how **statistical** measures of price histories can be predictive of lowered volatility
- Deployed an interactive web-app on **AWS** using **Python**, **Flask**, and **HTML/CSS**

Creator / Data Scientist – www.sixdegreestojoerogan.com

Apr 2018 – Jun 2018

- Designed and deployed organized and easily searchable database of interview guests of over 160 podcasts by **web scraping** and **data cleaning** using **Python**
- Enhanced discoverability of new podcasts based on past guests
- Performed **exploratory analysis of network structure** to provide insights on who are the most influential podcasts and guests based on **network centrality measures**

Graduate Student Researcher – UC Santa Barbara Dept. of Physics Jun 2013 – Sep 2017

- Analyzed and simulated white dwarf + helium star binaries engaged in mass transfer leading to explosions using 1D stellar modeling software (MESA)
- Collaborated with scientists at Caltech, UC Berkeley, UC Santa Cruz, Bonn University, and Moscow State University, including conceiving of and modeling a new type of observable stellar collapse
- Furthered understanding of stellar explosion progenitors by authoring six and coauthoring three publications in The Astrophysical Journal

Teaching Assistant – MESA Summer School

Aug 2012 – Aug 2017

- Supervised annual week-long workshop of lectures and exercises for graduate students, post-docs, and faculty from all around the world
- Prepared and tested the exercises in advance of program
- Provided advice, debugging help, and explanations of results for participants

University Physics Teaching Assistant – UC Santa Barbara

Oct 2012 – Jun 2014

- Taught upper and lower division physics and astrophysics classes, from dozens to 300+ students per class
- Developed valuable communication and leadership skills
- Led discussion sections, held office hours, wrote solution sets in **LaTeX**, and graded homeworks and exams

EDUCATION

UC Santa Barbara

- Ph.D. in Physics
- M.A. in Physics

Mar 2015 – Sep 2017

Sep 2012 – Mar 2015

University of Southern California

- BSc in Physics, Minor in Mathematics

Aug 2007 – May 2011