

# JARED MURPHY

# DATA SCIENTIST

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## SUMMARY

I am a Data Scientist with a background in Mathematics and Statistics. I currently specialize in Time Series Analysis, and for my most recently completed project I used ARIMA modeling to test the validity of Covid-19 mortality data released by Johns Hopkins University and the CDC. I am currently in the final stages of completing a comprehensive technical analysis of the crypto-asset Bitcoin. In this project I compare the behavior of Bitcoins price action to that of several other asset classes and provide means for making long term forecasts for the future price of Bitcoin.

## EDUCATION

**University of North Florida**  
B.S. Statistics 2015

June 2013 - Aug. 2015

**Springboard Data Science Career Track**

Mar. 2020 - Jan. 2021

Intensive course in data science, machine learning, Python and SQL

## EMPLOYMENT

**Self-Employed, Carpenter/Residential Painter, Hudson Valley, NY**

Oct. 2016 - Current

Finish carpentry, rough carpentry, drywall, concrete, residential painting

**High School Equivalency Instructor, Dutchess Community College, Poughkeepsie, NY**

Mar. 2016 - Oct. 2016

Teaching high school math and science to students of all ages

**Sales Associate, DSW, Jacksonville, FL**

Aug. 2010 - Aug. 2015

Customer service, shipping and receiving

## SKILLS

**DATA SCIENCE:** Python, pandas, numpy, statsmodels, sklearn

**MACHINE LEARNING: SUPERVISED LEARNING:** KNN, Regression, Decision Trees, Random Forest, Gradient Boosting, SVM, Precision, Recall, Accuracy, F1, ROC

**MACHINE LEARNING: UNSUPERVISED LEARNING:** K-means Clustering, Hierarchical Clustering, Mean-Shift Clustering, PCA, Cosine Similarity

**MATHEMATICS AND STATISTICS:** Calculus I, II, III, Linear Algebra, Mathematical Statistics, Probability, Bayesian Methods, Hypothesis Testing, ANOVA

**RELATIONAL DATABASES:** SQL, MySQL, SQLite

**DATA VISUALIZATION WITH PYTHON:** matplotlib, seaborn

## PROJECTS

Excess Deaths - [https://github.com/jared-m-murphy/Springboard/blob/main/Capstone\\_1/Capstone\\_Final.ipynb](https://github.com/jared-m-murphy/Springboard/blob/main/Capstone_1/Capstone_Final.ipynb)

May 2020 - Nov. 2020

ARIMA modelling was used to forecast excess deaths in US counties during the time period of 02/01/20 to 10/31/20. Excess deaths were then compared with provisional deaths due to Covid-19 released by Johns Hopkins University and the CDC.

Bitcoin: A Technical Analysis - [https://github.com/jared-m-murphy/Springboard/blob/main/Capstone\\_2/Bitcoin.ipynb](https://github.com/jared-m-murphy/Springboard/blob/main/Capstone_2/Bitcoin.ipynb)

Nov. 2020 - Current

A comprehensive technical analysis of the crypto-asset Bitcoin, followed by a comparison of Bitcoins price action to that of US sovereign debt, US equities, precious metals, and US commercial real estate over different time horizons. Stock to Flow models are investigated and forecasts are provided.

## AWARDS

**Graduated Summa Cum Laude, University of North Florida**

Aug. 2015

**Inducted into Pi Mu Epsilon Mathematics Honors Society, Florida Eta Chapter**

Aug. 2015

## VOLUNTEERING

**Kunzang Palchen Ling (Buddhist Center), Carpenter/General Contractor**

Jan. 2016 - Sept. 2019

Red Hook, NY

Construction and maintenance of a Buddhist monastery in upstate New York