

# 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

<b>University of North Florida</b> B.S. Statistics 2015	June 2013 - Aug. 2015
<b>Springboard Data Science Career Track</b> Intensive course in data science, machine learning, Python and SQL	Mar. 2020 - Jan. 2021

## EMPLOYMENT

<b>Self-Employed, Carpenter/Residential Painter</b> , Hudson Valley, NY Finish carpentry, rough carpentry, drywall, concrete, residential painting	Oct. 2016 - Current
<b>High School Equivalency Instructor</b> , Dutchess Community College, Poughkeepsie, NY Teaching high school math and science to students of all ages	Mar. 2016 - Oct. 2016
<b>Sales Associate</b> , DSW, Jacksonville, FL Customer service, shipping and receiving	Aug. 2010 - Aug. 2015

## SKILLS

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

**MACHINE LEARNING: SUPERVISED LEARNING:** KNN, Linear, Logistic, Multiple 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

## PROJECTS

<b>Excess Deaths in United States Counties 02/01/20-10/31/20</b> 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. <a href="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</a>	May 2020 - Nov. 2020
<b>Bitcoin: A Technical Analysis</b> 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. <a href="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</a>	Nov. 2020 - Current

## AWARDS

<b>Graduated Summa Cum Laude</b> , University of North Florida	Aug. 2015
<b>Inducted into Pi Mu Epsilon Mathematics Honors Society</b> , Florida Eta Chapter	Aug. 2015

## VOLUNTEERING

<b>Kunzang Palchen Ling (Buddhist Center)</b> , Carpenter/General Contractor Red Hook, NY Construction and maintenance of a Buddhist monastery in upstate New York	Jan. 2016 - Sept. 2019
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