

# 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 recent 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 working on a project using Random Forest, Gradient Boosting and SVM to categorize the cryptocurrency Bitcoin into an asset class. I will then use that information to help create several predictive models to forecast the price of Bitcoin for 2021.

## EDUCATION

### University of North Florida

B.S. Statistics 2015

June 2013 - Aug. 2015

### Springboard Data Science Career Track

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

Mar. 2020 - Jan. 2021

## EMPLOYMENT

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

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

Oct. 2016 - Current

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

Teaching high school math and science to students of all ages

Mar. 2016 - Oct. 2016

### Sales Associate, 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

### Excess Deaths in United States Counties 02/01/20-10/31/20

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.

May 2020 - Nov. 2020

### Bitcoin: Asset Classification and Price Predictions for 2021

Random Forest, Gradient Boosting and SVM were used to help discover Bitcoin's asset class. Exponential smoothing and ARIMA models were then used to forecast the price of Bitcoin for 2021.

Nov. 2020 - Current

## 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

Red Hook, NY

Construction and maintenance of a Buddhist monastery in upstate New York