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   June 2013 - Aug. 2015
B.S. Statistics 2015

Springboard Data Science Career Track   Mar. 2020 - Jan. 2021
Intensive cousrse 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 Due to Covid-19   May 2020 - Nov. 2020
- Python Tools: numpy, pandas, matplotlib, sklearn, statsmodels
- Used CDC mortality data with ARIMA modeling and Facebook's Prophet to estimate excess deaths in US for 02/01/2020-10/31/2020
- Excess deaths were then compared to reported deaths due to Covid-19 and no significant discrepancies were found
- https://github.com/jared-m-murphy/Springboard/blob/main/Capstone_1/Capstone_Final.ipynb

Bitcoin: A Technical Analysis   Nov. 2020 - Jan. 2021
- Python Tools: numpy, pandas, matplotlib, seaborn
- Provided a description of Bitcoin as an emerging asset class and a comprehensive overview of its historical price action
- Retrieved various asset price data from API's using pandas
- Created customized charts using matplotlib to provide visual comparisons of Bitcoins volatility and returns to those of other asset classes
- Developed complex functions in python to extract meaningful insights from time series financial data
- Investigated Bitcoins popular Stock to Flow model and provided price predictions for the coming year
- https://github.com/jared-m-murphy/Springboard/blob/main/Capstone_2/Bitcoin.ipynb

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