

[Home](#)[Metrics](#)[Team](#)[Products](#)

EMPOWERING INVESTORS WITH AI- DRIVEN CRYPTO INSIGHTS

ML-powered crypto prediction platform that helps investors make informed decisions using macroeconomic indicators

[Meet the Team](#)

OUR TEAM



Julia
Benedic



Olha
Omelchenko



Anna
Araszewska



Ritiz
Sapkota





The Core Metrics Powering Our Models

[View In Detail](#)

Home



Macro



Product



Models



About



Insufficient permissions to the underlying data set.

[See details](#)

Insufficient permissions to the underlying data set.

[See details](#)

Insufficient permissions to the underlying data set.

[See details](#)

Insufficient permissions to the underlying data set.

[See details](#)

Insufficient permissions to the underlying data set.

[See details](#)**EFFR Running AV****2%****Avg CPI****267.24**

COMP Close (NASDAQ Composite)

Heavily tech-weighted index; higher correlation with Bitcoin due to shared investor base and sensitivity to liquidity conditions.



Stock Market Overview (DJIA, SPX, COMP, VIX) - Last 10 Years



No Data Set Access

Insufficient permissions to the underlying data set.

[See details](#)

Stock Market Indices



No Data Set Access

Insufficient permissions to the underlying data set.

[See details](#)

Consumer Price Index (CPI) Over Time"



Macro & Economic Indicators

DATE	CPIAUCSL ▾
1 Dec 2024	317.69
1 Nov 2024	316.44
1 Oct 2024	315.45
1 Sept 2024	314.69
1 Aug 2024	314.12
1 Jul 2024	313.53
1 May 2024	313.23
1 Apr 2024	313.21
1 Jun 2024	313.05
1 Mar 2024	312.23

1 - 100 / 119

<

>

DATE	BTC_Close ▾
22 Nov 2024	98,997.66
21 Nov 2024	98,504.73
24 Nov 2024	98,013.82
23 Nov 2024	97,777.28
29 Nov 2024	97,461.52
30 Nov 2024	96,449.05
27 Nov 2024	95,962.53
28 Nov 2024	95,652.47
20 Nov 2024	94,339.49
25 Nov 2024	93,102.3

1 - 100 / 3591

<

>

VIX Close

VIX Close – The "fear gauge" of the market, measuring expected volatility; spikes often signal market uncertainty, impacting Bitcoin as investors shift risk exposure



S&P 500 Index (SPX)

Tracks the performance of the 500 largest U.S. companies. Often correlated with crypto, especially during 'risk-on' or 'risk-off' market conditions



Factors Shaping Bitcoin's Value

[Home](#)
[Metrics](#)
[Team](#)
[Products](#)


Home



Macro



Product



Models



About

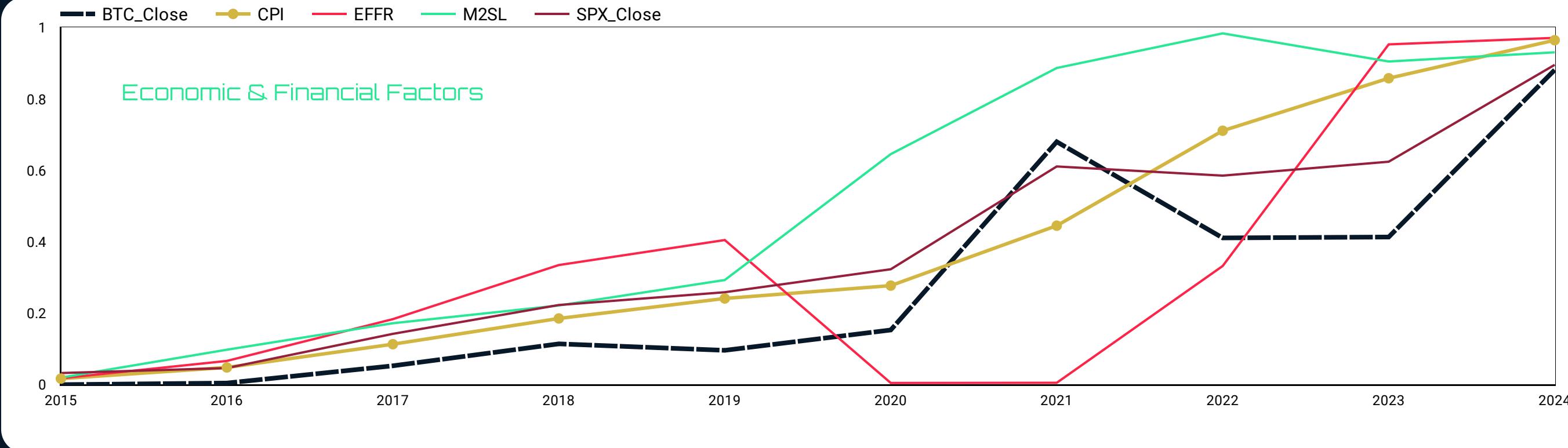
Fear and Greed Index

47.42

Markets →

DOW	44,747.63	0.28% ▼
S&P 500	6,083.57	0.36% ▲
NASDAQ	19,791.99	0.51% ▲

Bitcoin and Key Metrics (CPI, EFFR, M2, and S&P 500)



Select date range

Fear & Greed Index

Multifactorial Crypto Market Sentiment Analysis

Now:
Fear

alternative.me

Last updated: Feb 7, 2025

Bitcoin's Price: Impact of Major Global Events

Social & Geopolitical Events

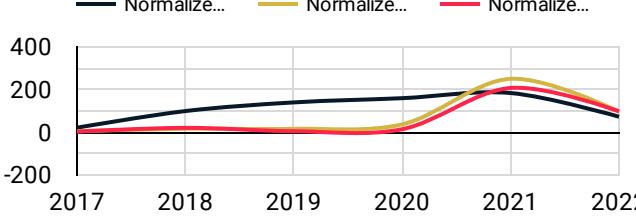


No Data Set Access

Insufficient permissions to the underlying data set.

[See details](#)

History :Bitcoin & Market Sentiment





Home



Macro



Product



Models



About

OUR Models => OUR Products



Prophet - "The Optimist"

Prophet is the most optimistic model
It captures long-term trends

Caveat: sometimes it overestimates future price movements



XGBoost - "The Cautious Predictor"

XGBoost provides cautious, at times overly conservative predictions.
It learns well from data.

Caveat: it struggles with extreme price swings



Prophet

RMSE

9,825.29

R2

0.699

XGBoost

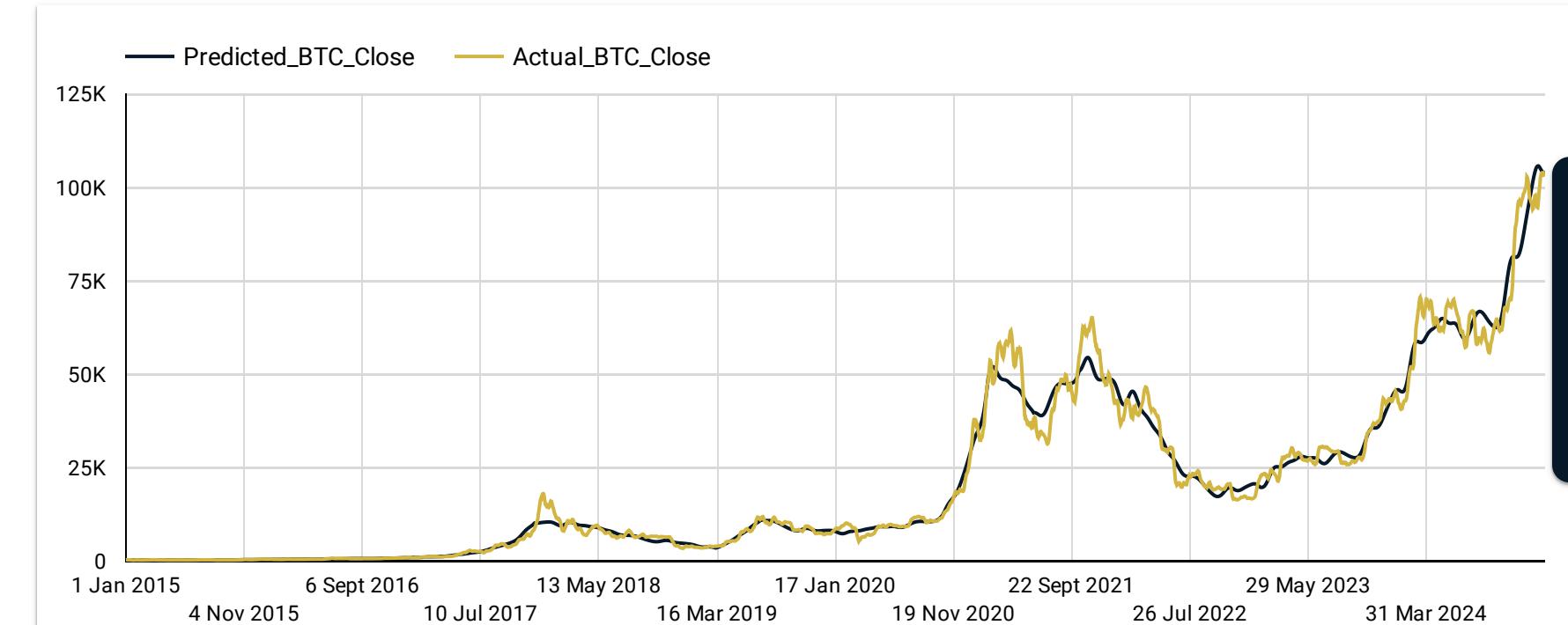
RMSE

8,887.62

R2

0.26

Prophet Model



Trained on historical data and tested on a short, 6-month holdout period (July 2024 - January 2025).

XGBoost Model



Trained on BTC historical data from 2015-2025, leveraging seasonality and trend detection rather than short-term fluctuations

[More Models](#)



Home



Macro



Product



Models



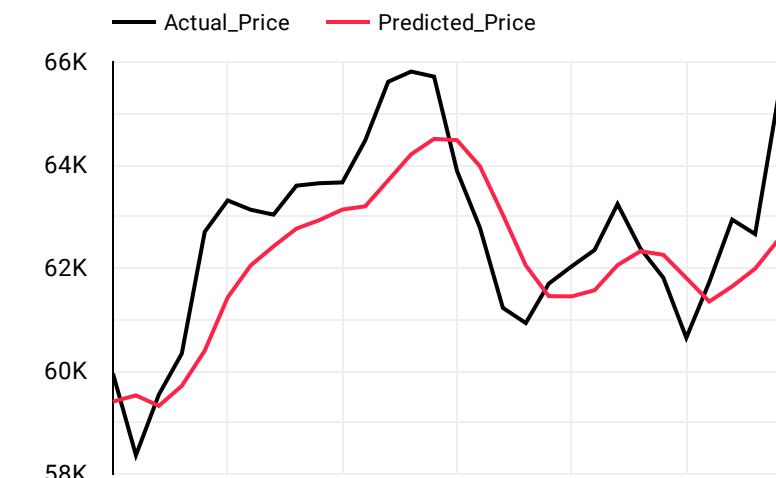
About

SARIMA



LSTM

LSTM BTC PRICE BEFORE ELECTION

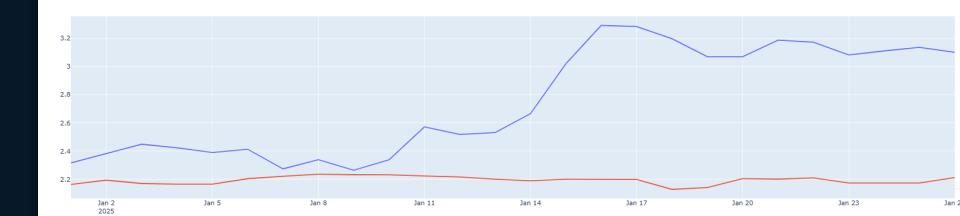
[Enlarge View](#)

SARIMA, which stands for Seasonal Autoregressive Integrated Moving Average, is a versatile and widely used time series forecasting model. It's an extension of the non-seasonal ARIMA model, designed to handle data with seasonal patterns.

MAPE 32.92%

- SARIMA is very effective when working with time series;
- It can be used for forecasting trend lines;
- Comparing errors in predictions for highly volatile assets requires further tuning

Random forest



RANDOM FOREST is a collection of decision trees that work together to make predictions.

MSE: 0,65

- Random Forest is not designed to work with time series;
- however, it helped us to validate our hypothesis)

MAPE: 4.72%

LSTM MODEL IN DEPTH



MONIEEZ



Home



Macro



Product



Models



About

- LSTM is the most accurate model, but even deep learning models cannot predict Trump
- It can be tuned much more effectively, but this requires time
- This is an area for our future analysis.

[Notebook](#)

- The MSE versus Time Lag in Ripple price forecasting using the Random Forest model and Bitcoin price decreases from 0.65 (with the unshifted price) to 0.42 (with a 12-day shift)

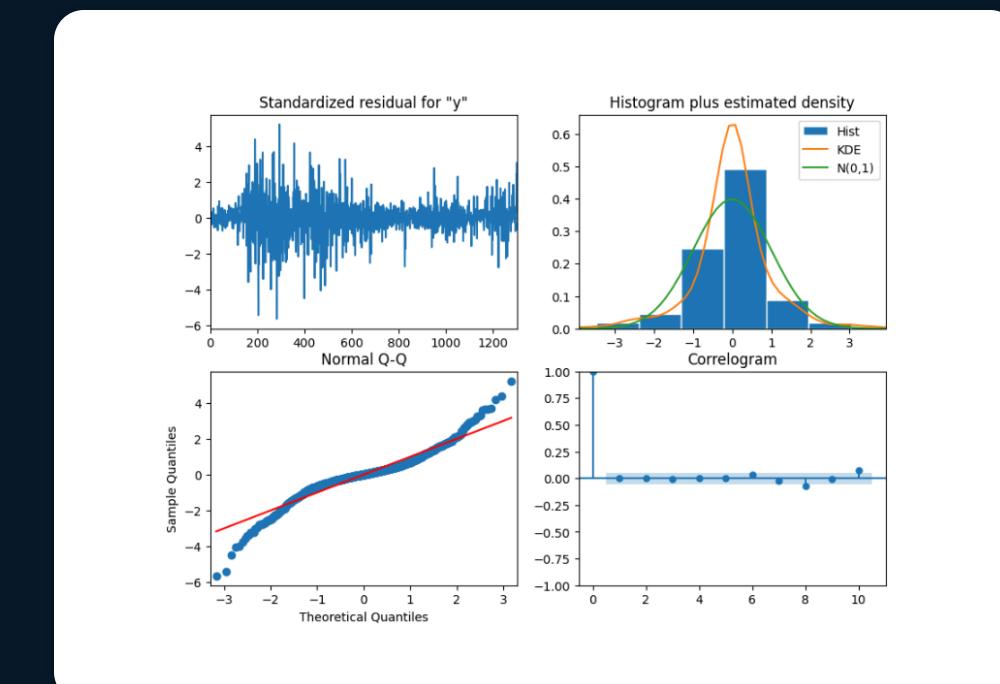
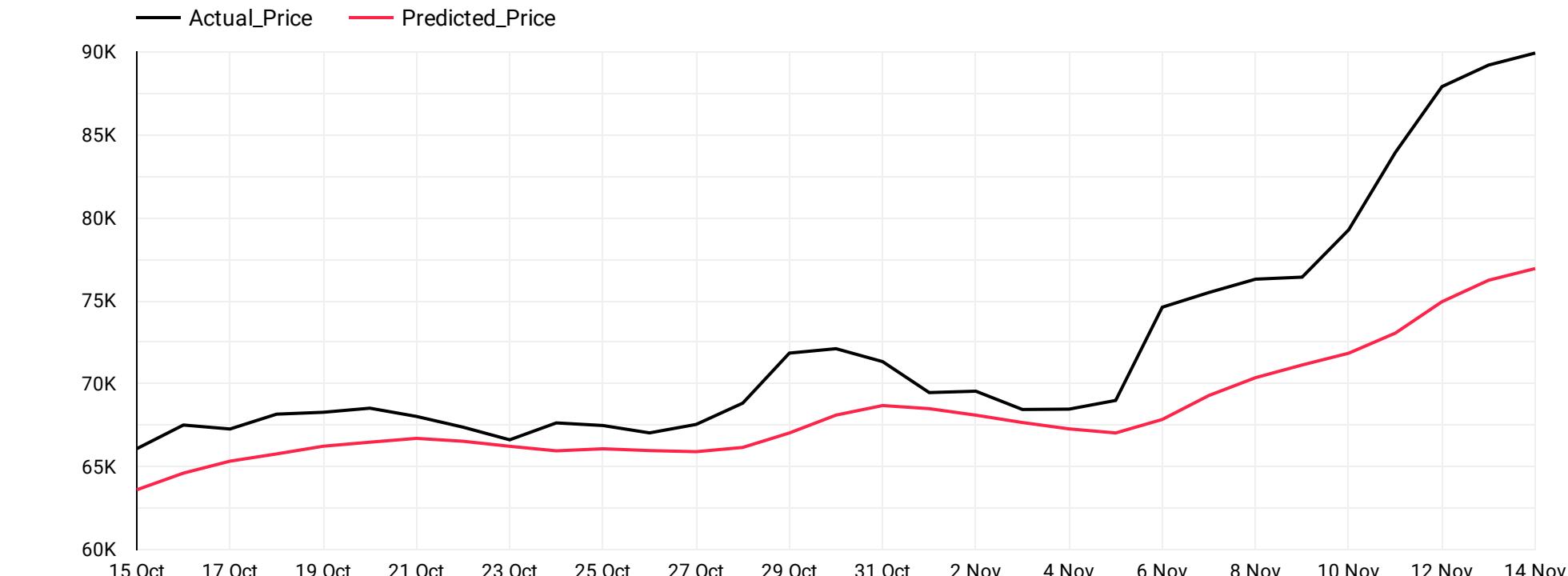
- we can predict the prices of Ripple and other cryptocurrencies using Bitcoin's historical prices and the Random Forest model. However, we cannot predict Bitcoin prices using Ripple with an acceptable level of accuracy.

Hypothesis 2 – Validated

What's Shaping BTC Value? [click here]

LSTM MODEL

LSTM BTC PRICE AFTER ELECTION



SARIMA

time series



trend lines



tuning



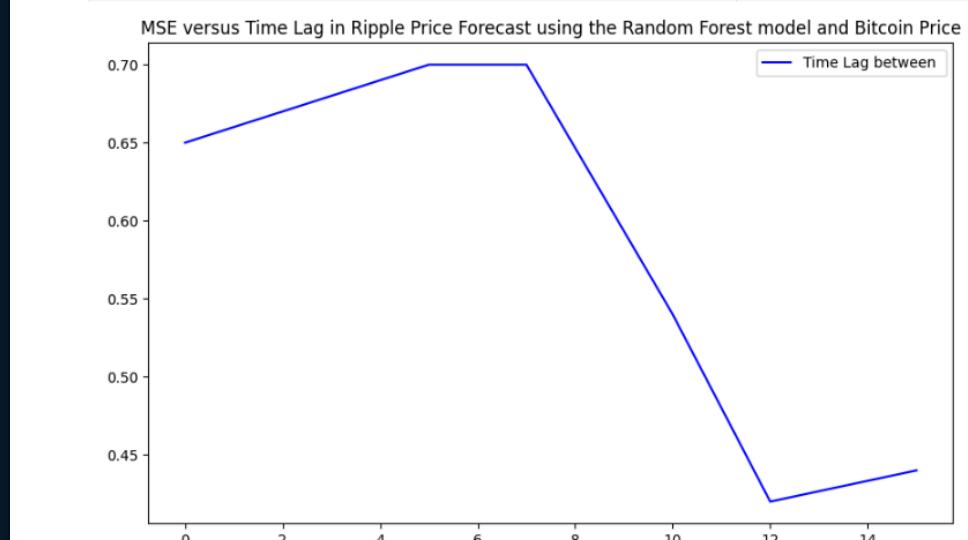
model validation



time series



RANDOM FOREST



Crypto Price Predictions (Next 6 Months)



Home



Macro



Product



Models



About

Bitcoin Price
£98,997.66

Bitcoin Trading Vol
1,219,952.92

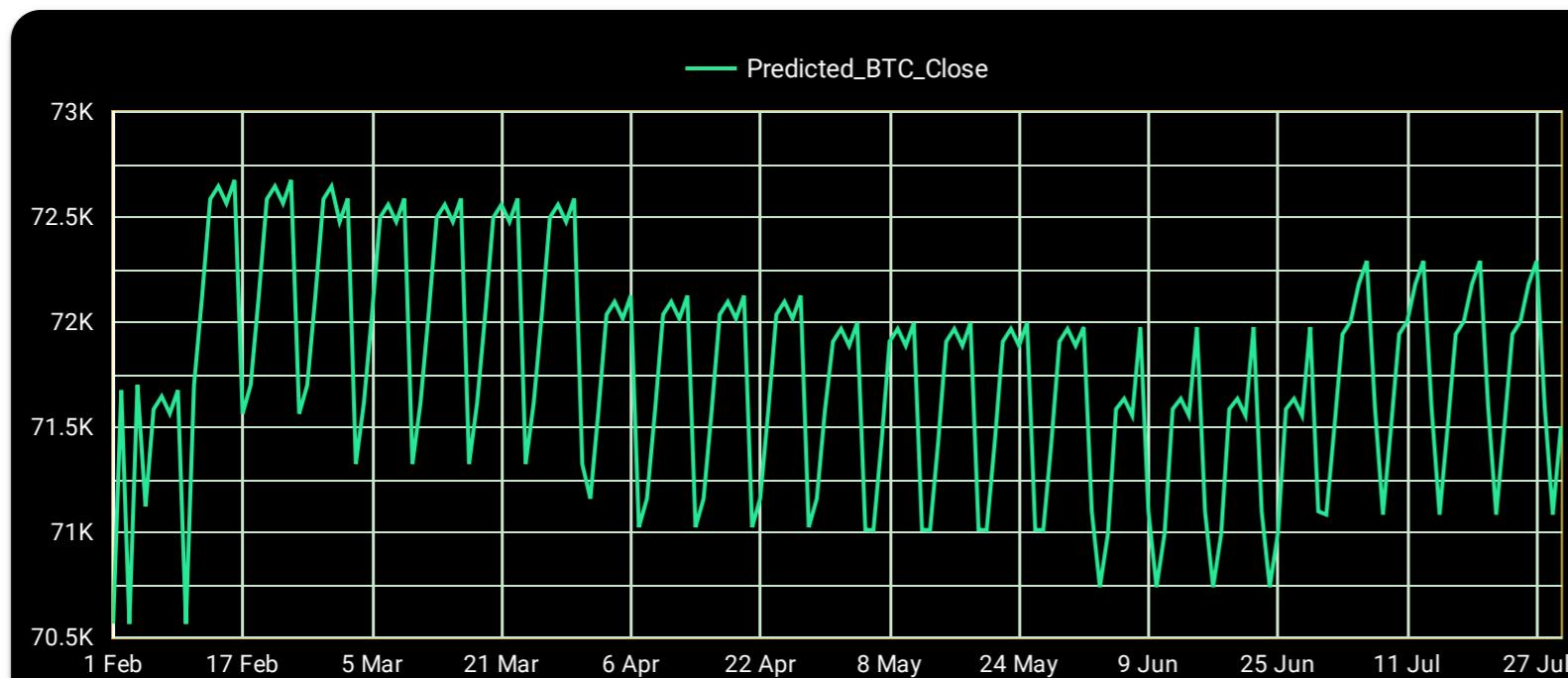
Ethereum Price
1,465.62

ETH_Volume
621,732,992

Feeling Pessimistic?



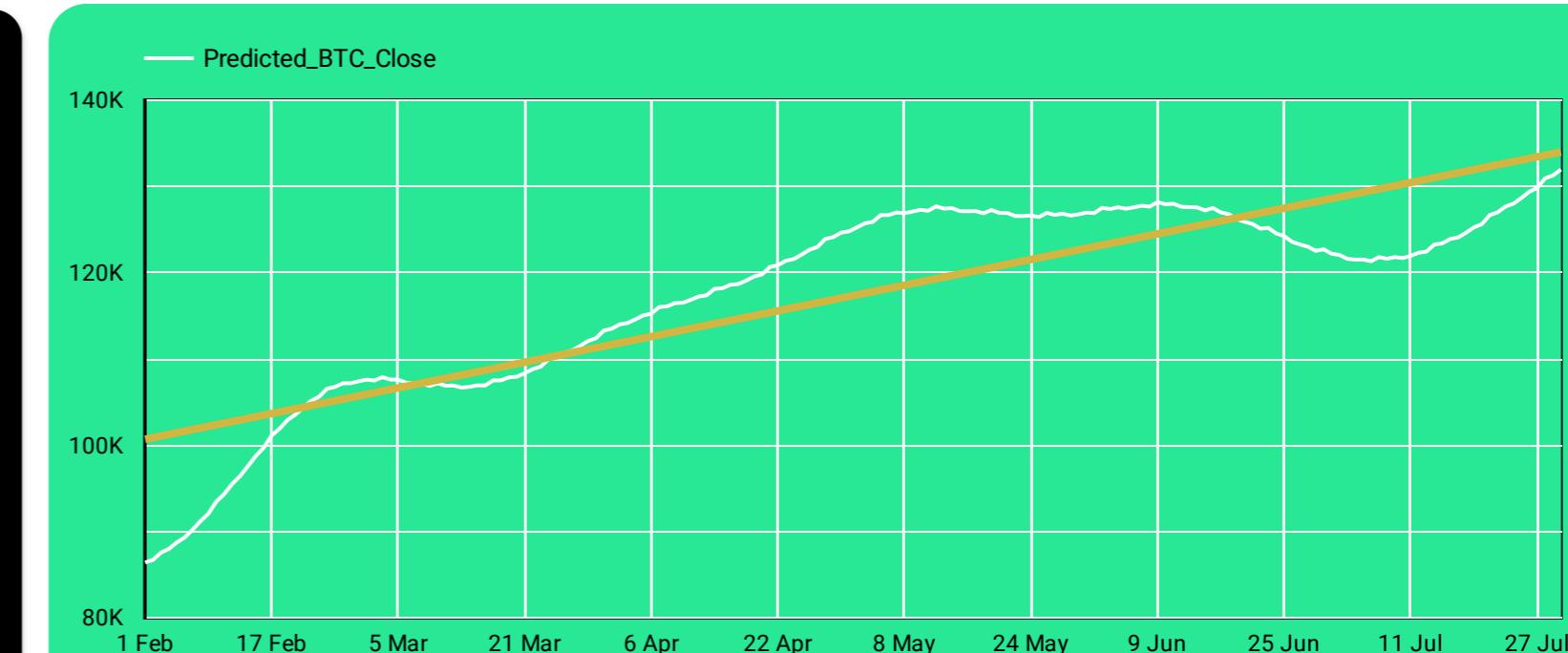
XGBoost- Predicted Bitcoin Price



Feeling Optimistic?



Prophet- Predicted Bitcoin Price



Real time price for BTC & ETH

