

Block 0x43a5fc78

616E7433E23D00FA63	1841	6065
0676972A711B2E34	00FF7020	6F
64206957A361BC	1A007D	61
E20486510D3F5	90	6E2074
16C6B7350901D	01	6E20
726565A32FA55	470900AA206865	63
852757145AB01	001020	2C20
13206F5590BF34	1210	C373
74616C773192A3	10	20
15272216145A18	00A1	2067
40635CF74AF81	F620	6F
20480891AA	FC00	6C6420
708B2C0740010D3F5A8	42	65
E642074686520C	9C7B34	6E20
0AA6336865206	00	368A
368646F2065561A711B2	00AF	33
0A3BCE561AF87010FC28E00	102073	73

Making informed investment decisions
A Bitcoin Price Forecast



Time Series Data

- yFinance
- Federal Reserve Banks



Model for Time Series

- ARIMA, XGBoost, Prophet



EDA & Manipulation

- Patterns/Distribution over Time
- Box Cox Data Transformation



Model Fit Preparation

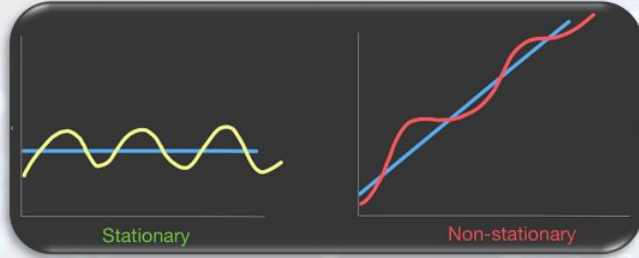
- Logistic/linear, Features, Hyperparameter, CV
- choose best model



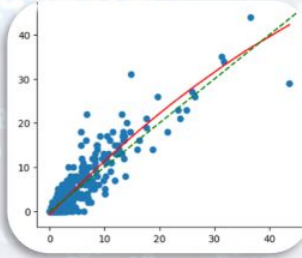
Accuracy & Cross-Validation

- Mean Absolute Percentage Error
- Within reasonable range for high volatility

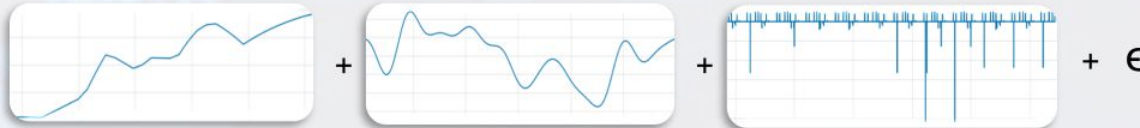
ARIMA



XGBoost



FB Prophet



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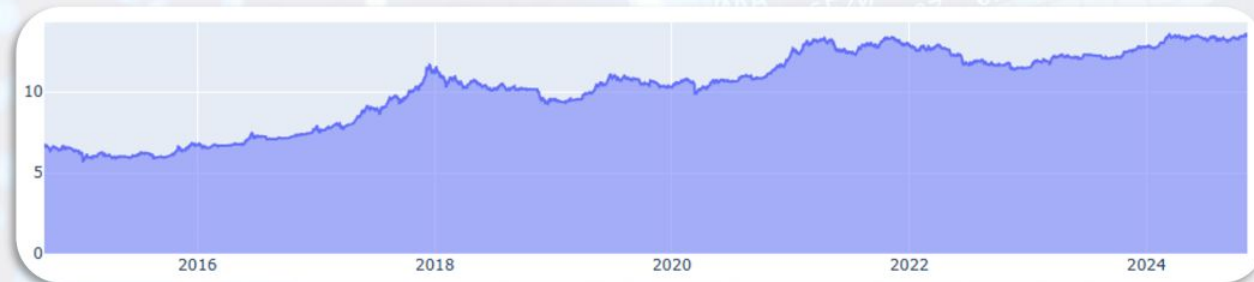
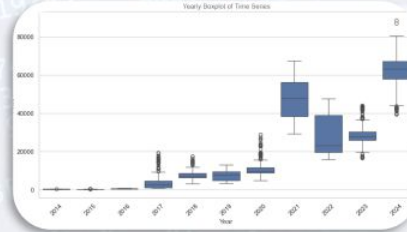
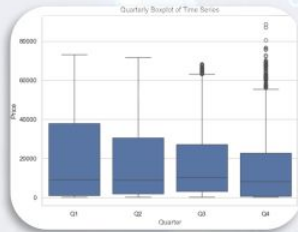
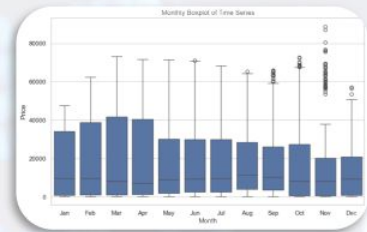
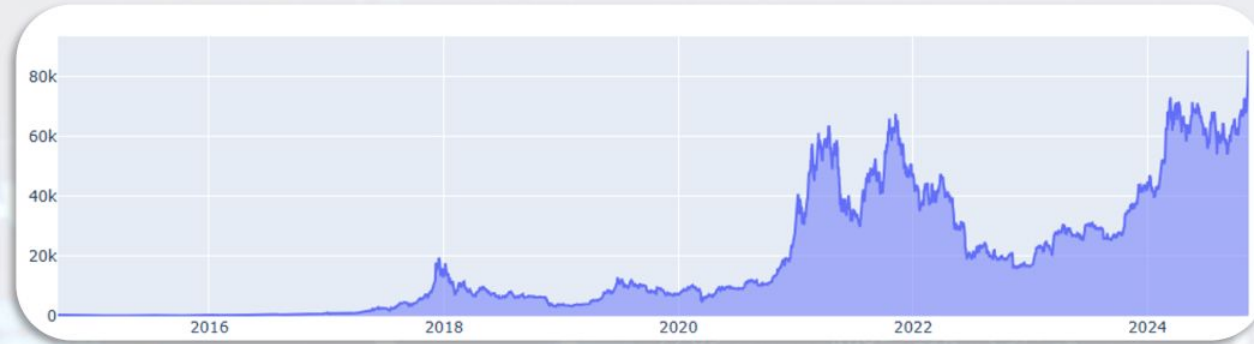
Model Fit Preparation

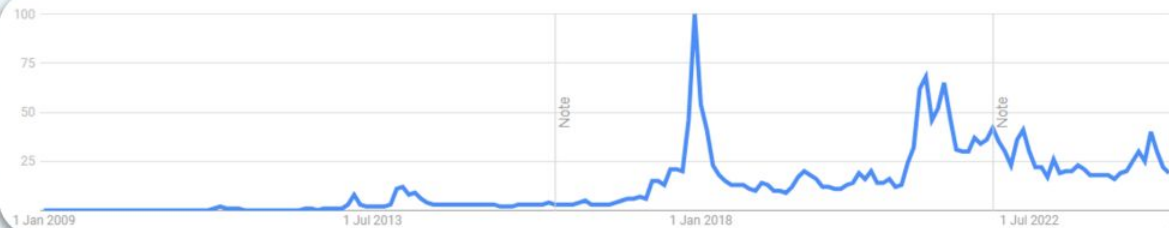
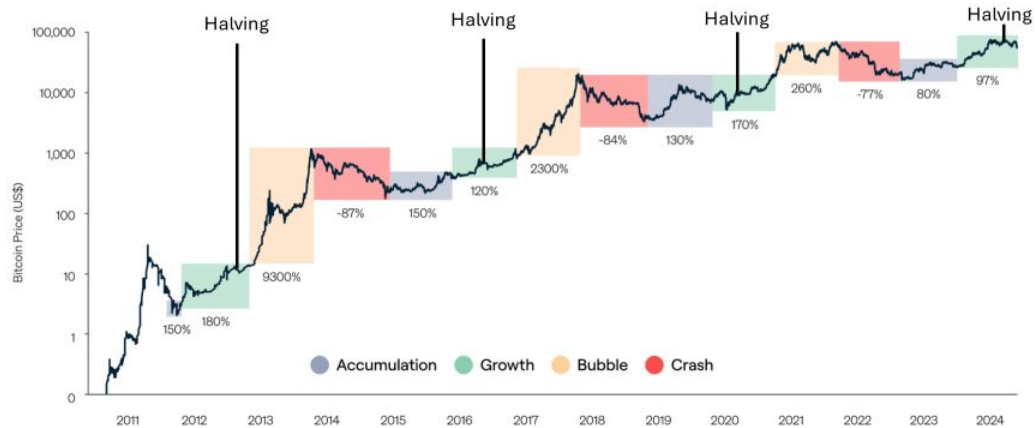
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Regulation and Investment Products

Time Series Data

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- Federal Reserve Banks

Model for Time Series

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EDA & Manipulation

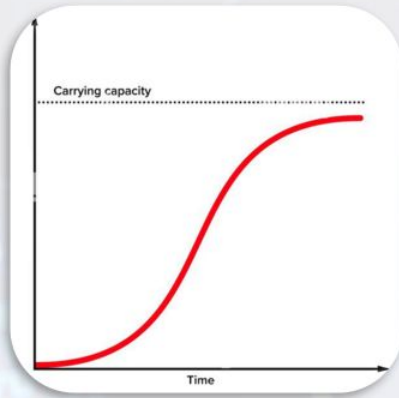
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Trend

- Logistic

Upper Limit

- $\text{Max target value} + \text{STD\%}$

Sensitivity

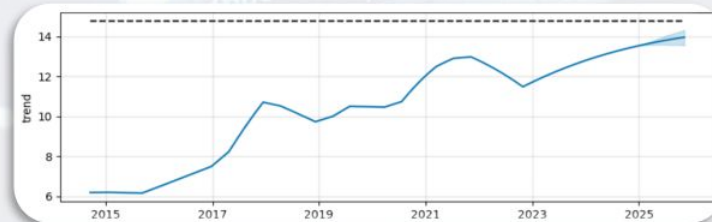
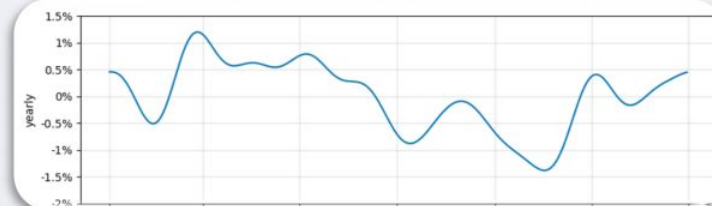
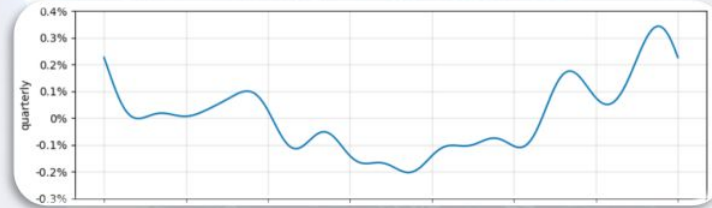
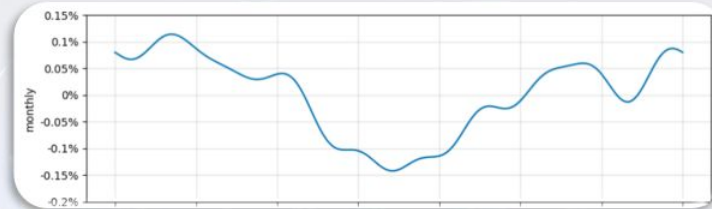
- To breakpoints in trend (Changepoints)
- To seasonality

Seasonalities

- Monthly, Quarterly, Yearly

Additional Regressors

- Global Liquidity



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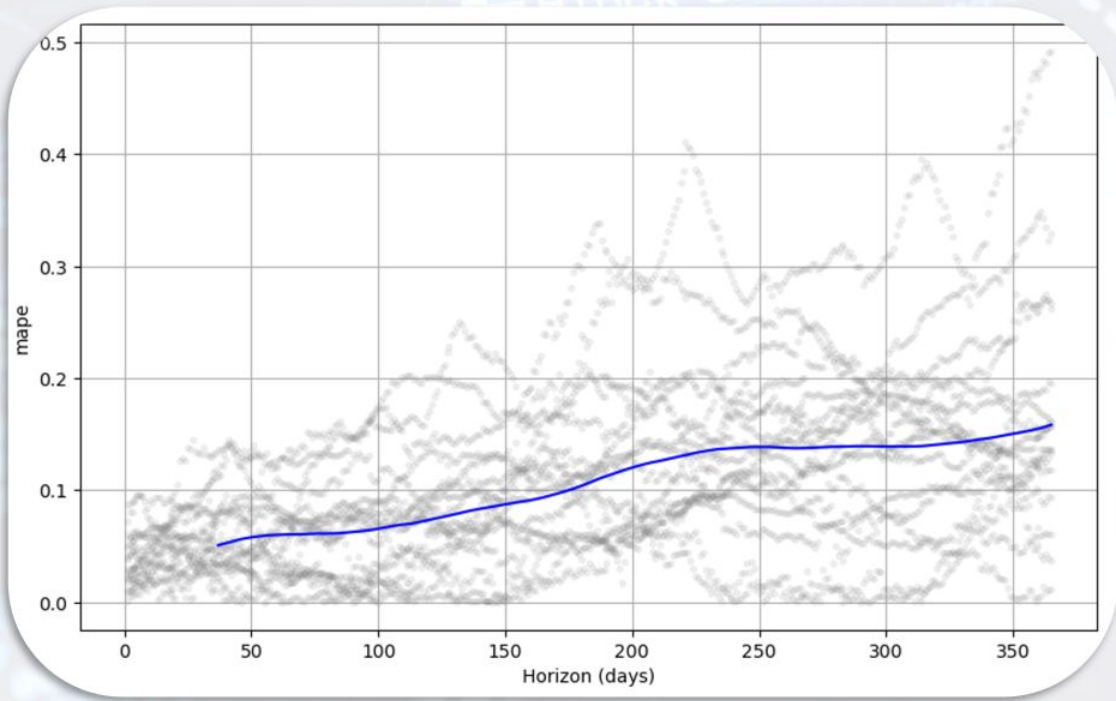
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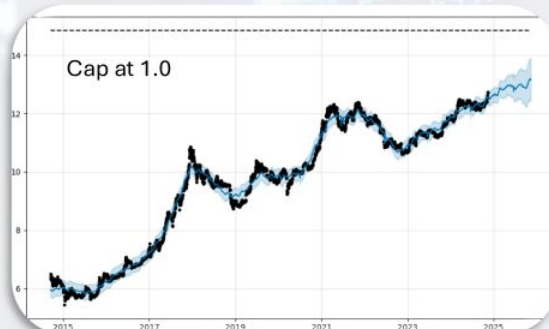
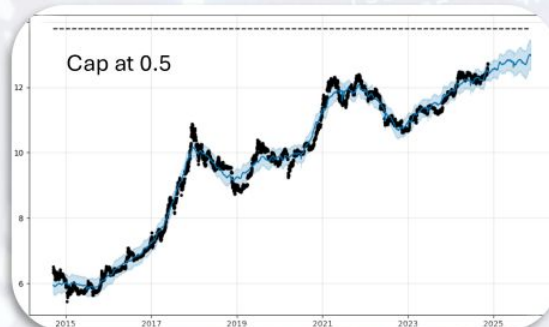
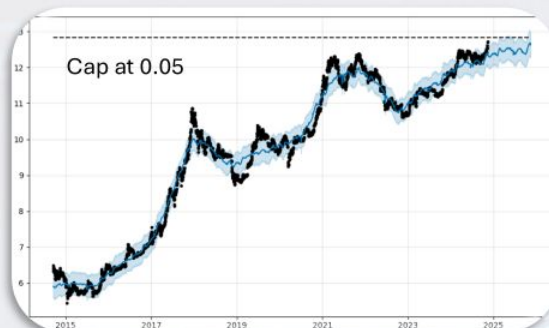
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	horizon	mse	rmse	mae	mape	mdape	mape coverage
0	37 days	0.357155	0.597625	0.511254	0.050009	0.046895	0.050539
1	38 days	0.366645	0.605512	0.518195	0.051550	0.047536	0.051274
2	39 days	0.375201	0.612337	0.523576	0.052153	0.047990	0.051873
3	40 days	0.384485	0.620069	0.529261	0.052773	0.048007	0.052489
4	41 days	0.394091	0.627767	0.534879	0.053377	0.048635	0.053089
...
324	361 days	3.206718	1.790731	1.597784	0.155586	0.138642	0.152642
325	362 days	3.239475	1.799854	1.603995	0.156247	0.138642	0.153176
326	363 days	3.273453	1.808967	1.610201	0.156812	0.138642	0.153712
327	364 days	3.308542	1.818840	1.617088	0.157425	0.138396	0.154300
328	365 days	3.343818	1.828811	1.623686	0.158030	0.137961	0.154882