B1TCO1NPROJECT

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Agenda

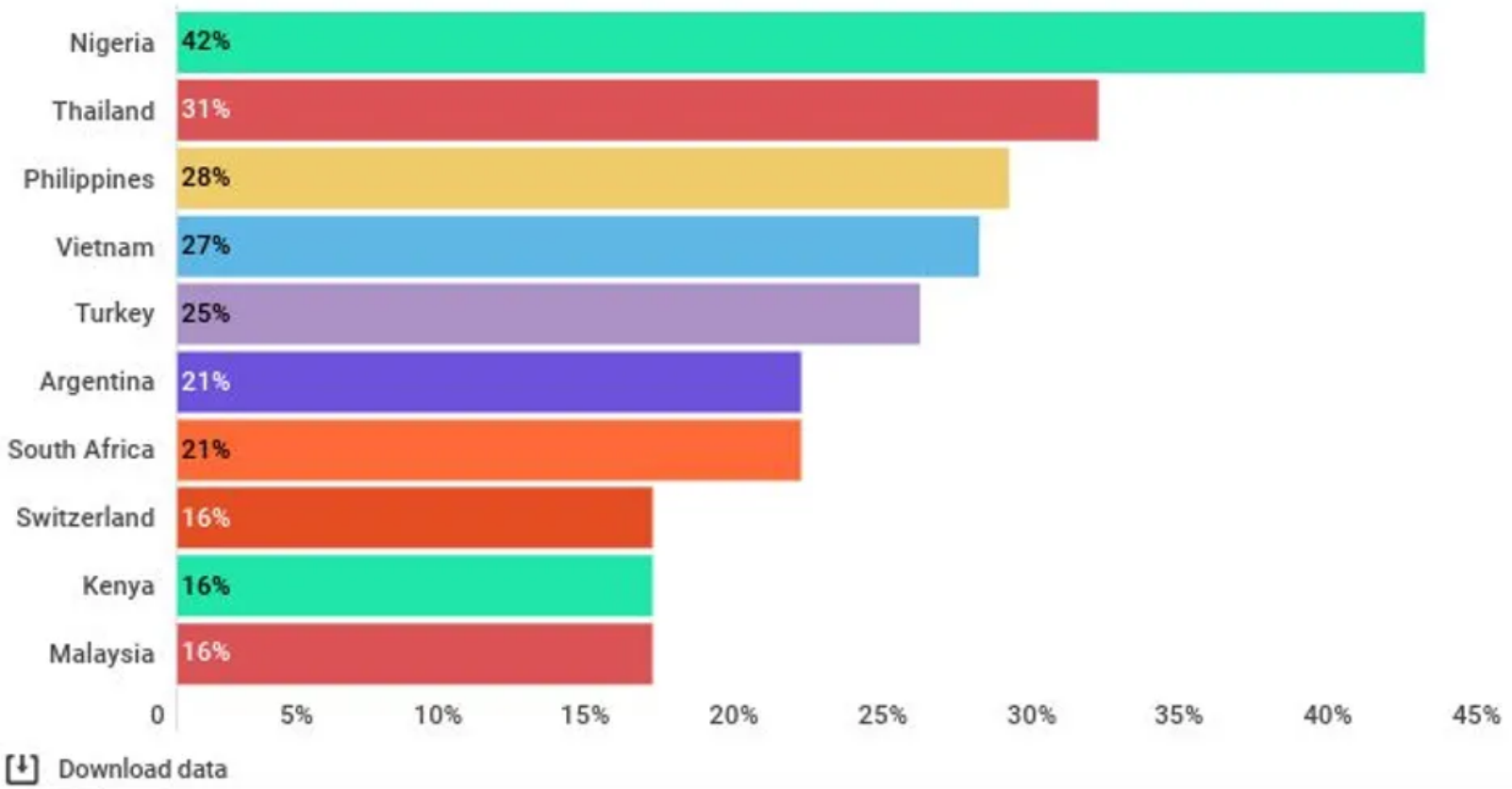
- Introduction
- Objective
- Method
- Results - Prophet and Logistic Regression
- Bonus: Classification: Buy Zones
- Summary and Conclusion

Introduction

Bitcoin uses peer-to-peer technology to operate with no central authority or banks; managing transactions and the issuing of bitcoins is carried out collectively by the network.

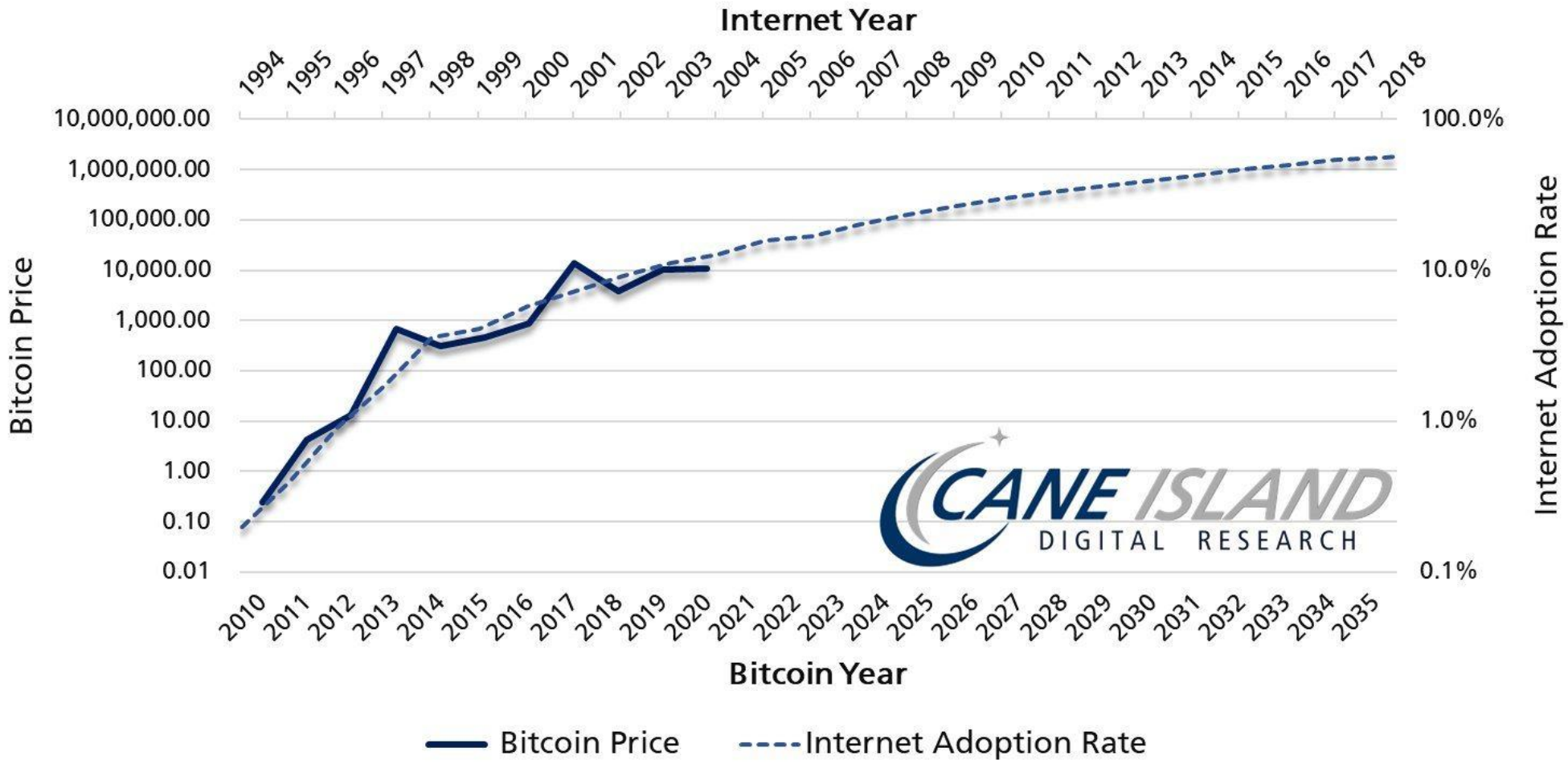
I chose this topic because I believe bitcoin is a tool for economic sovereignty, individual property rights and financial inclusion.

Top 10 Countries by Crypto Adoption

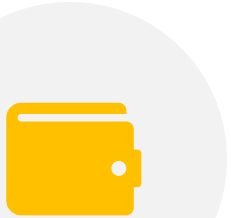


BanklessTimes

Internet Adoption Rate vs. Bitcoin Price



Objective

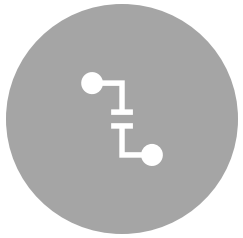


Use the Prophet time series model to forecast price, wallets and value(according to Metcalfe's Law) up to 2024.

Determine overvalued or undervalued compared to Metcalfe's Law of Network Adoptions and Moving averages up to 2024.

Method

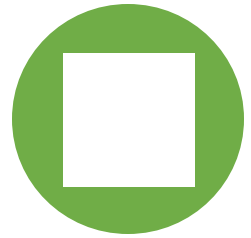
SOURCE DATA



CREATE POSTGRES THEN LOAD TO VS CODE TO CURATE AND CLEAN THE DATA.

PROPHET TIME SERIES

LOGISTIC REGRESSION



ONEVSRESTCLASSIFIER

Time Series: Stationarity Tests pt. 1

	Mean 1	Mean 2	Variance 1	Variance 2
Log Prices	3.963961	9.174585	5.856168	1.358006
Linear Prices	230.57	16936.32	61688.13	288670101.6

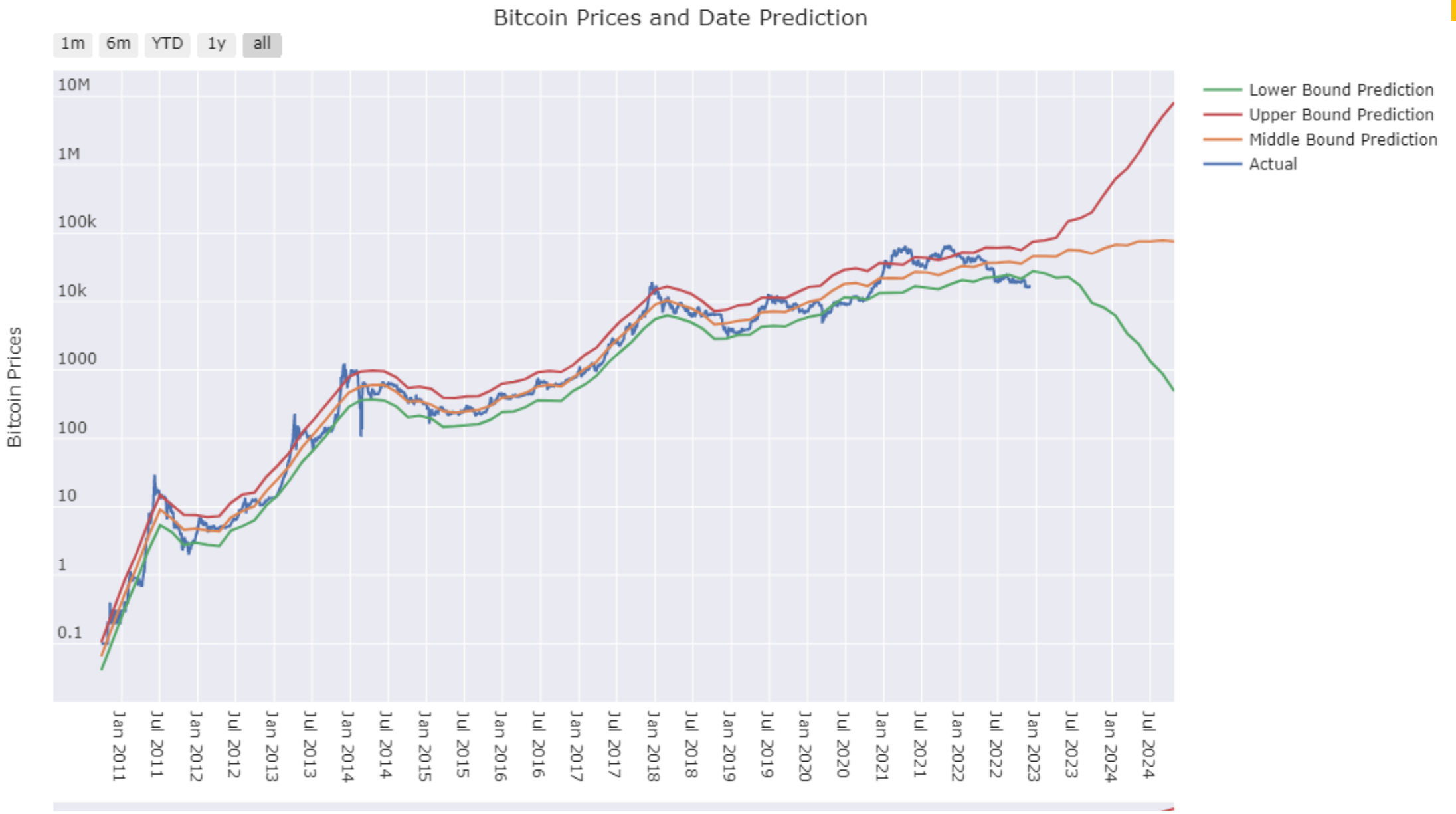
Stationarity Tests pt. 1: Augmented Dickey-Fuller Test – P Value

0.0210 for Logarithmic

0.395855 for Linear

Results Prophet

	r2 Score	MSE	MAE
Log Prices	0.9866	0.139	0.2809
Linear Prices	0.7455	54484853.2	4327.367
Value	0.988	0.115	0.249
Wallets	0.997	0.0741	0.1325


Bitcoin Prices and Date Prediction
1m
6m
YTD
1y
all
Bitcoin Prices
10M
1M
100k
10k
1000
100
10
1
0.1
Jan 2011
Jul 2011
Jan 2012
Jul 2012
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Jul 2019
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Jan 2022
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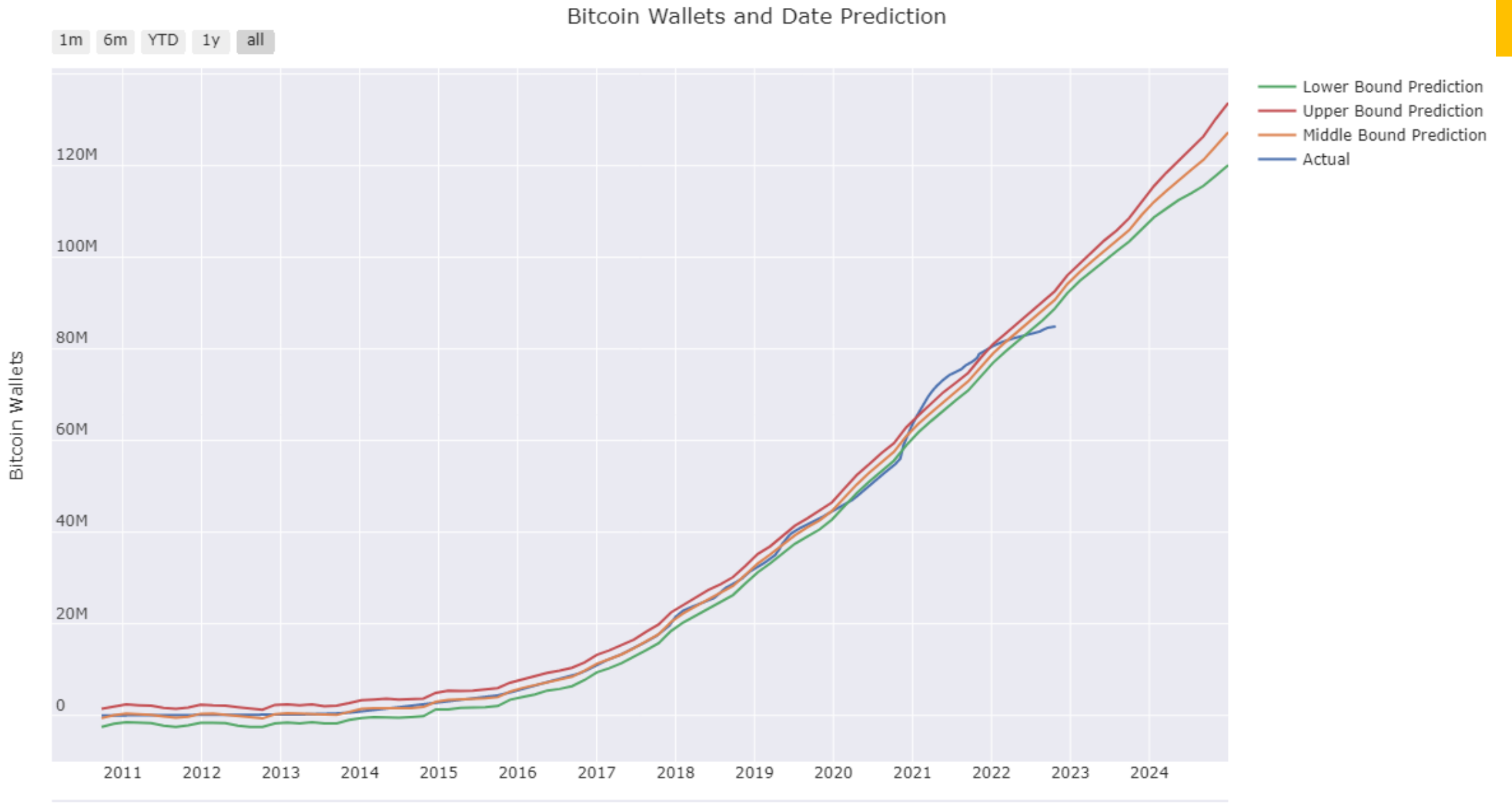
Jan 2024
Jul 2024
Lower Bound Prediction
Upper Bound Prediction
Middle Bound Prediction
Actual


Bitcoin Wallets and Date Prediction
1m
6m
YTD
1y
all
Bitcoin Wallets
120M
100M
80M
60M
40M
20M
0
2011
2012
2013
2014
2015
2016
2017
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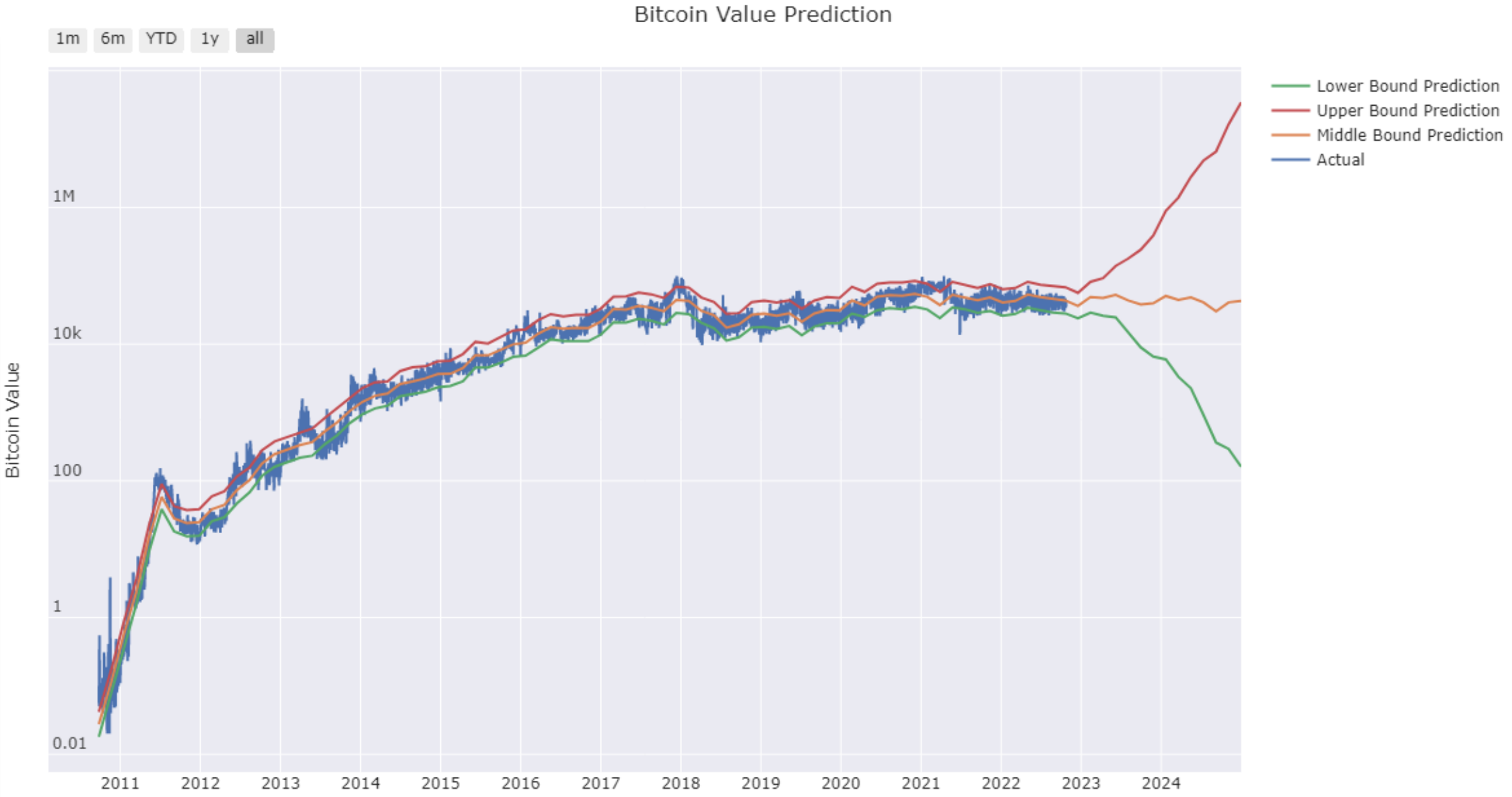
2022
2023
2024
Lower Bound Prediction
Upper Bound Prediction
Middle Bound Prediction
Actual


Bitcoin Value Prediction
1m
6m
YTD
1y
all
Lower Bound Prediction
Upper Bound Prediction
Middle Bound Prediction
Actual
Bitcoin Value
1M
10k
100
1
0.01
2011
2012
2013
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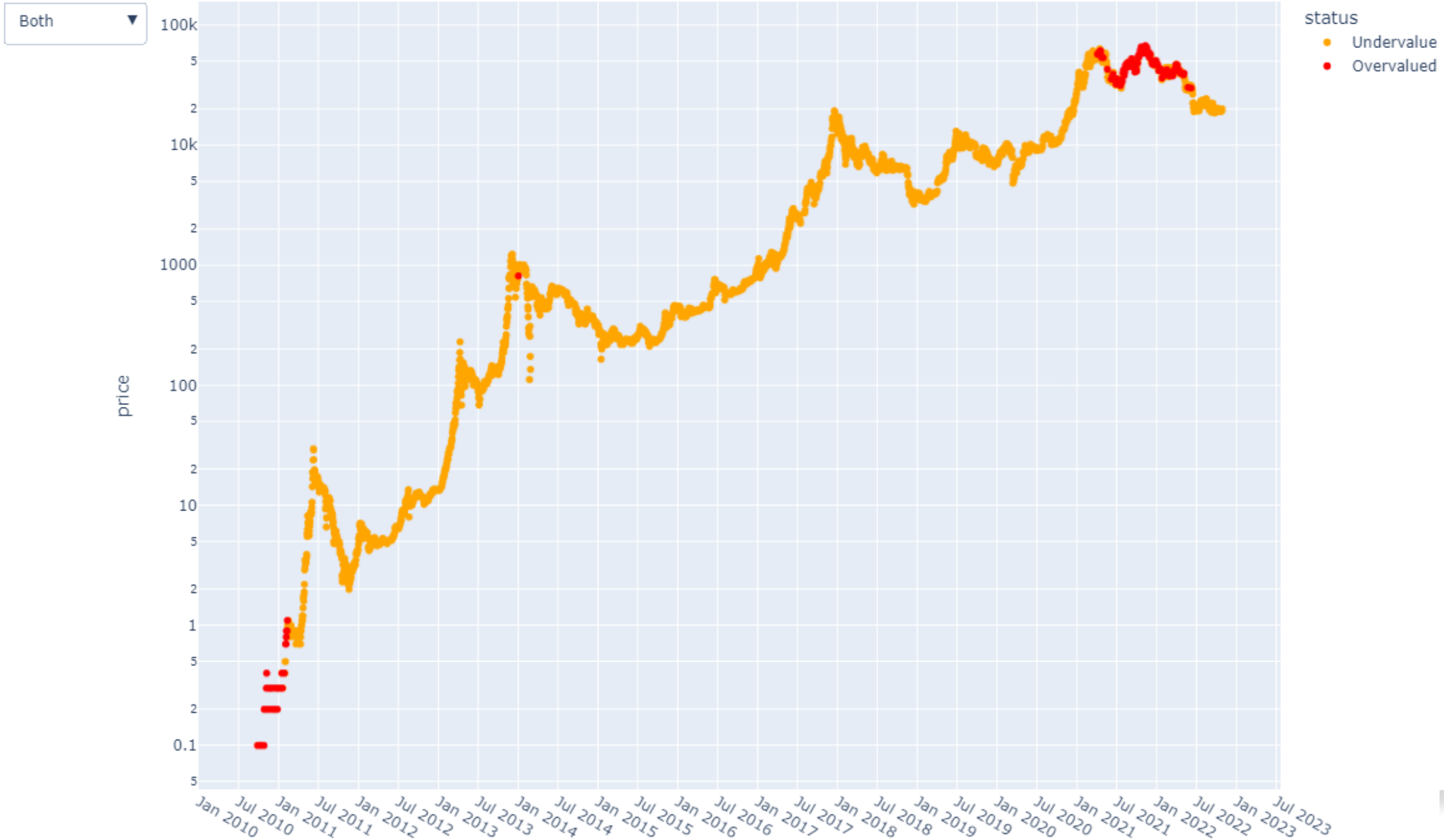
2021
2022
2023
2024

Results Logistic Regression: Value vs Moving Averages

	Moving Averages		Value - Metcalfe's Law	
	Predicted Undervalued	Predicted Overvalued	Predicted Undervalued	Predicted Overvalued
Actual Undervalued	494	0	1242	0
Actual Overvalued	0	744	69	5
Balanced Accuracy Score	1		0.947	


Both
status
Undervalue
Overvalued
price
100k
5
2
10k
5
2
1000
5
2
100
5
2
10
5
2
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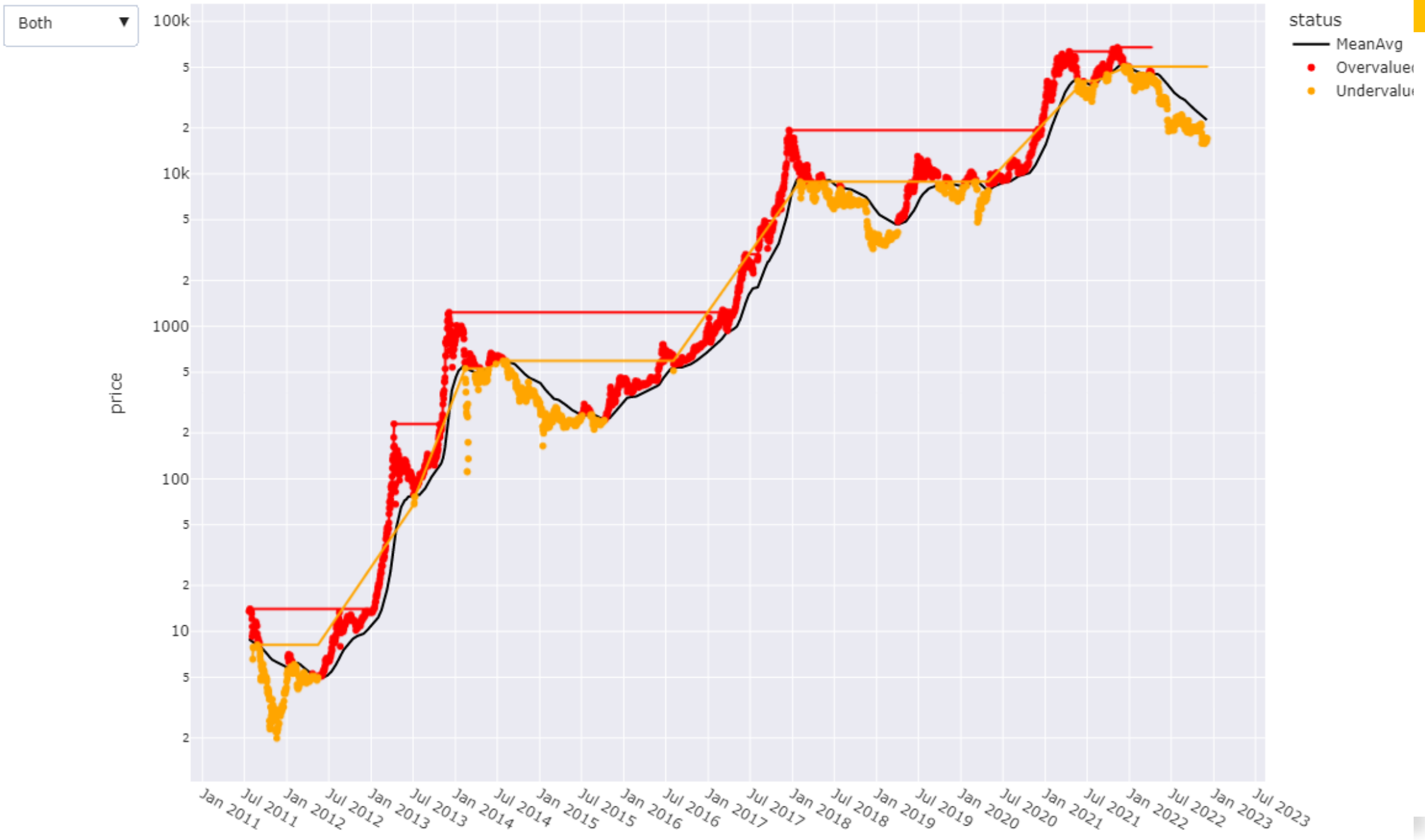
Both
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Overvalue
Undervalu
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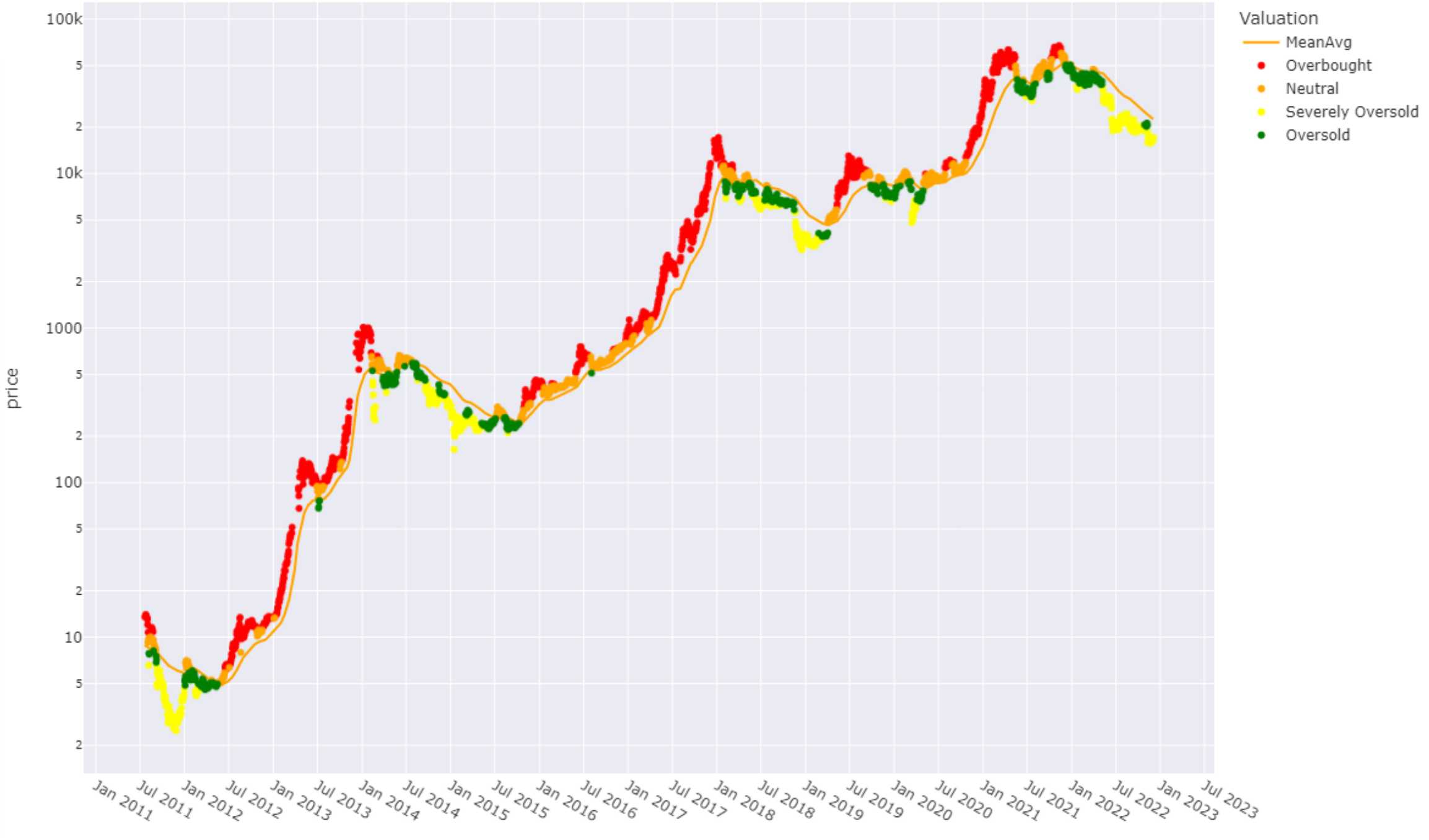
Jul 2023

Bonus: Classification: Buy Zones

	Predicted Severely Oversold	Predicted Oversold	Predicted Neutral	Predicted Overbought
Actual Severely Oversold	232	0	0	0
Actual Oversold	1	28	247	0
Actual Neutral	0	0	285	1
Actual Overbought	0	0	2	411


Valuation
MeanAvg
Overbought
Neutral
Severely Oversold
Oversold
price
100k
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2
10k
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1000
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100
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Jan 2023
Jul 2023

Summary

- Price is correlated to adoption
- Price + Valuation = Risk Management
- Metrics + Model Matters
- Valuable skills that I learned:
  - Troubleshooting
  - Persistence
  - Creativity
  - Crystalizing Learning