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EDA Report: Cryptocurrency Liquidity Prediction

1. Introduction

In this project, we analyze cryptocurrency data to predict liquidity, aiming to help understand market stability. Liquidity measures how easily an asset like Bitcoin or other cryptocurrencies can be bought or sold in the market without affecting its price.

2. Data Summary

The dataset contains information about cryptocurrency prices, returns over 1 hour, 24 hours, and 7 days, 24-hour trading volume, market capitalization, and date.

Below is the summary of the dataset:

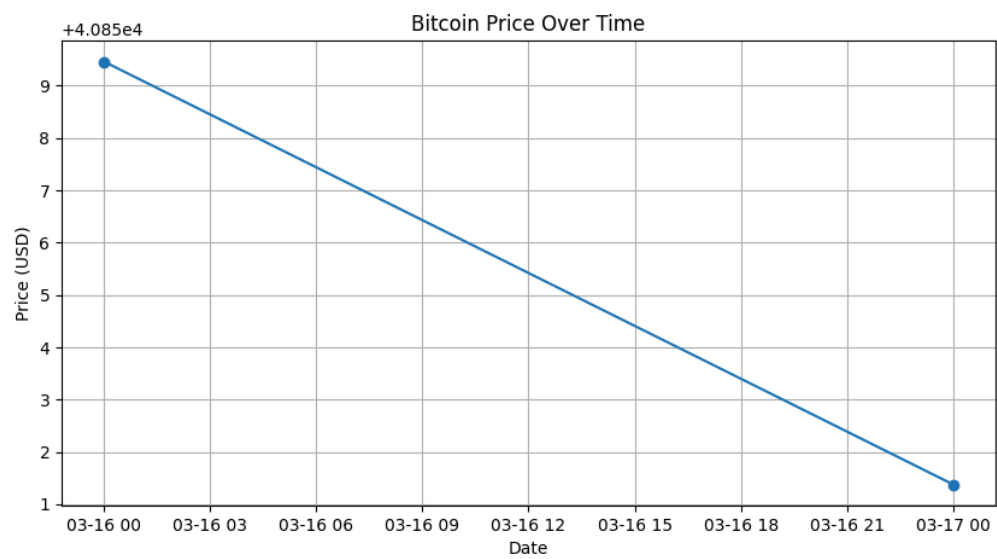
	price	1h	24h	7d	24h_ volu me	mkt_ cap	date	price _ma_ 2	mkt_c ap_m a_2	vol atili ty	liquidi ty_rati o
c o u n t	992	992	992	992	992	992	992	991	991	992	992
m e a n	620.0 5212 75	0.009 6824 6	0.024 0181 45	0.023 5584 68	2884 6384 5.6	3783 9507 96	58:32. 9	600.0 6203 91	33987 38445	0.0 286	0.102 41504 1

m	1.48	-0.70	-0.64	-0.55	0	6577	3/16/2	0.000	66055	0	0
in	E-09	4	6	8		0433	022	3076	442		
							0:00	94			
2	0.194	0.001	0.001	-0.04	1764	1158	3/16/2	0.676	11720	0.0	0.008
5	0547			1	198.2	5006	022	7785	1450.	06	75873
%	5				5	7.3	0:00	78	5		8
5	1.095	0.006	0.016	-0.00	8328	2131	3/16/2	2.383	21430	0.0	0.033
0				05	741	9527	022	175	7314	15	73807
%						1	0:00				3
7	6.955	0.019	0.035	0.037	3947	5972	3/17/2	19.45	60988	0.0	0.087
5					2221	4931	022	0084	2897.	33	05295
%						1.3	0:00	25	3		8
m	4121	0.095	0.577	4.608	5793	7.760	3/17/2	2183	5.575	0.5	5.948
a	7.27				4969	77E+	022	7.9	77E+1	3	54485
x					077	11	0:00		1		8
st	4421.	0.026	0.058	0.229	2771	3818		3044.	27444	0.0	0.364
d	9979	9174	6678	7812	1763	9701		1173	32970	461	72187
	63	65	35	64	34	989		64	5	91	1

3. Visual Explorations

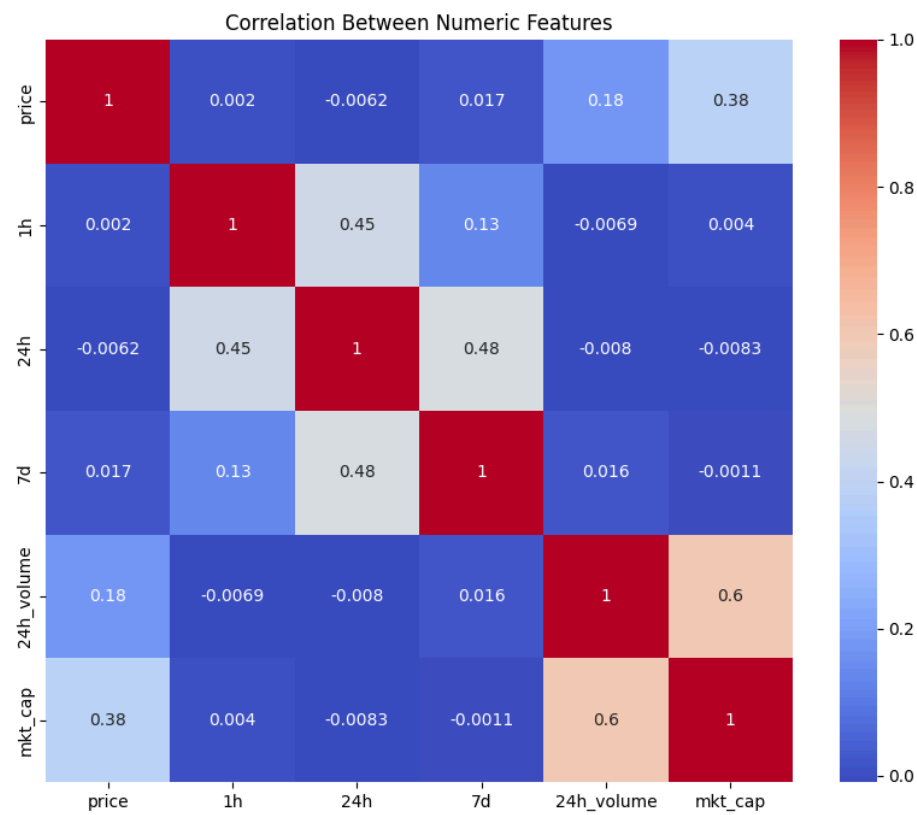
Bitcoin Price Over Time:

The trend of Bitcoin's price was plotted over the two days.



Correlation Between Numeric Features:

The correlation heatmap shows how different numerical features relate to each other.



4. Key Observations

- Bitcoin's price remained mostly stable across the two-day period.
- There is a strong positive correlation between cryptocurrency price and market capitalization.
- Volatility has a minor correlation with liquidity ratio.
- Trading volume also shows moderate relationships with liquidity.

5. Conclusion

Exploratory data analysis helped in understanding key relationships in the data.

This exploration guided the creation of new features like volatility and moving averages, leading to the development of an accurate machine learning model for liquidity prediction.