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Course Name: Data Analytics Course

EDA Report: Cryptocurrency Liquidity Prediction

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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.

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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:

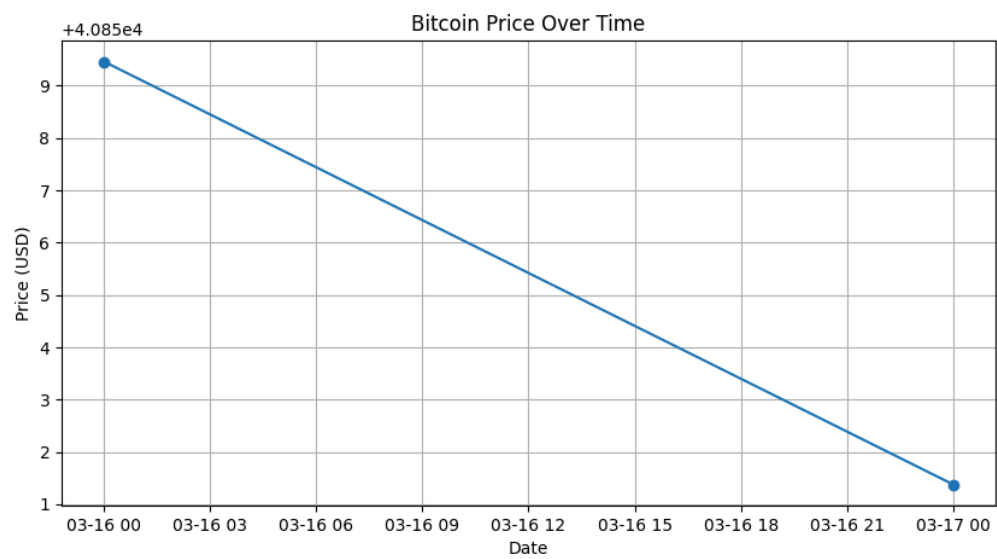|	price	1h	24h	7d	24h_volume	mkt_cap	date	price_ma_2	mkt_cap_ma_2	volatility	liquidity_ratio
count	992	992	992	992	992	992	992	991	991	992	992
mean	620.05212 75	0.009 6824 6	0.024 0181 45	0.023 5584 68	2884 6384 5.6	3783 9507 96	58:32. 9	600.0 6203 91	33987 38445	0.0 286	0.102 41504 1

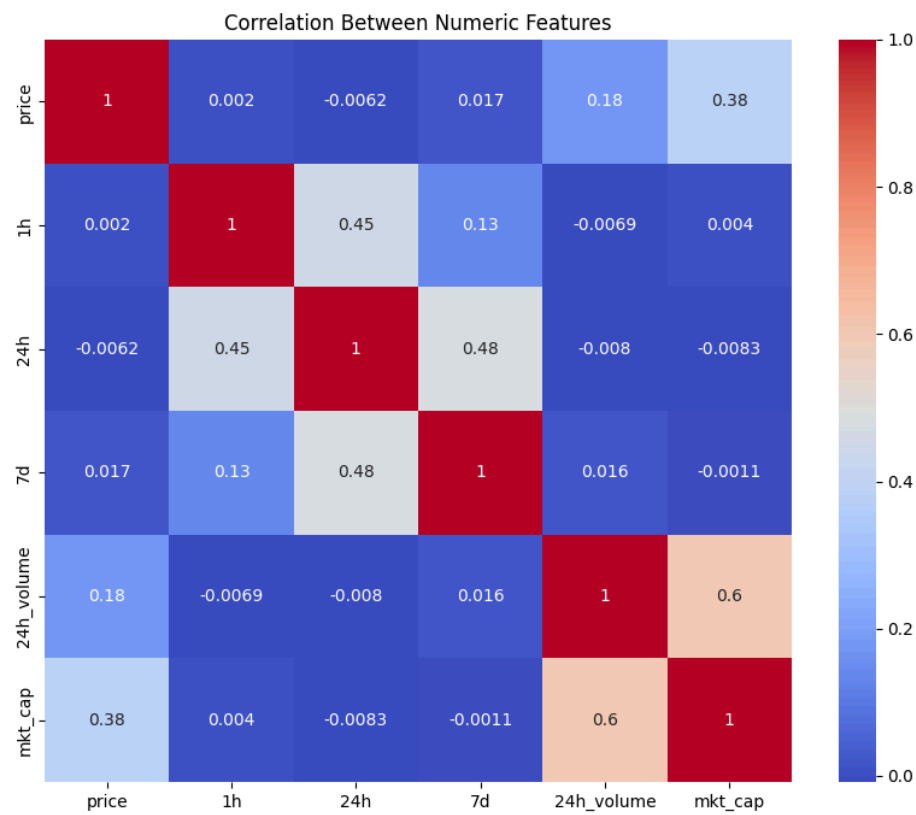|											
min	1.48E-09	-0.704	-0.646	-0.558	0	65770433	3/16/2022 0:00	0.00030766 94	66055442	0	0
25%	0.19405475	0.001	0.001	-0.041	1764198.25	115850067.3	3/16/2022 0:00	0.67677785 78	117201450.5	0.006	0.0087587388
50%	1.095	0.006	0.016	-0.0005	8328741	213195271	3/16/2022 0:00	2.383175	214307314	0.015	0.033738073
75%	6.955	0.019	0.035	0.037	39472221	597249311.3	3/17/2022 0:00	19.45008425	609882897.3	0.033	0.087052958
max	41217.27	0.095	0.577	4.608	57934969077	7.76077E+11	3/17/2022 0:00	21837.9	5.57577E+11	0.53	5.948544858
std	4421.997963	0.026917465	0.058667835	0.229781264	2771176334	38189701989		3044.117364	274443297 05	0.0461 91	0.364721871

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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.