

Project Title:

Crypto Analysis Dashboard Dynamic

Project Description

This is a dynamic cryptocurrency Market Dashboard which has dashboard changing according to the currency selected.

 **Cryptocurrency Dashboard**

Objective:

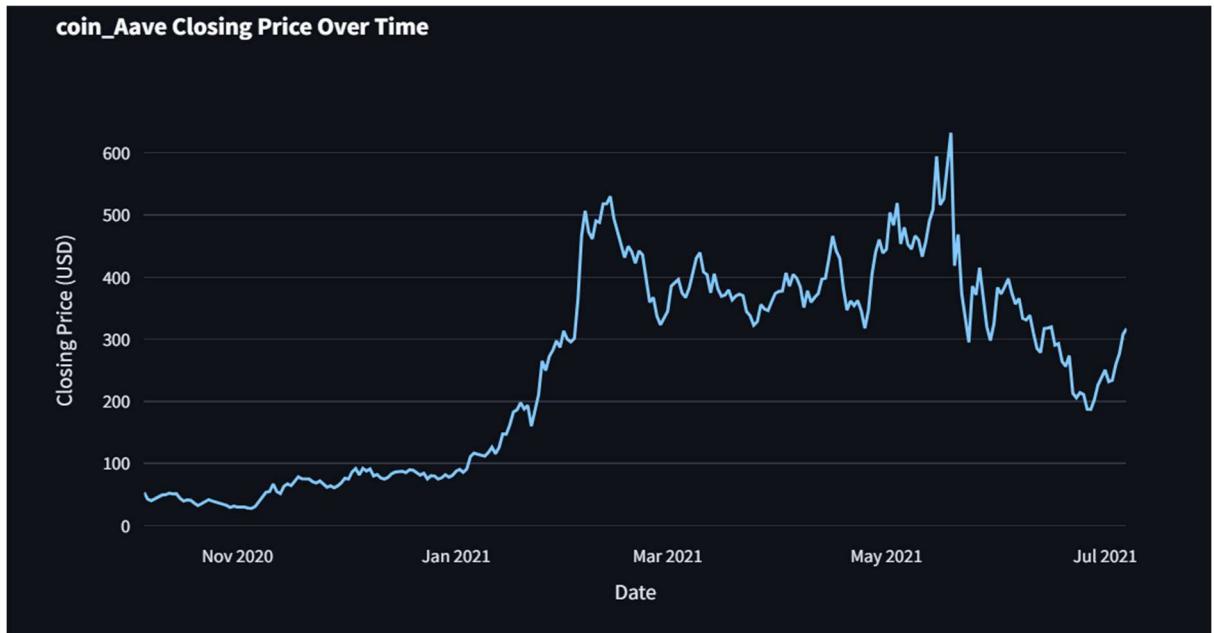
To analyze, visualize, and forecast cryptocurrency data, offering insights such as historical trends, volatility, stability, and inter-coin correlations.

Dataset Used:

- Historical cryptocurrency data (cleaned and pre-processed)
- Fields: Date, Coin, Close, Marketcap, Return, Volatility

Questions Answered:

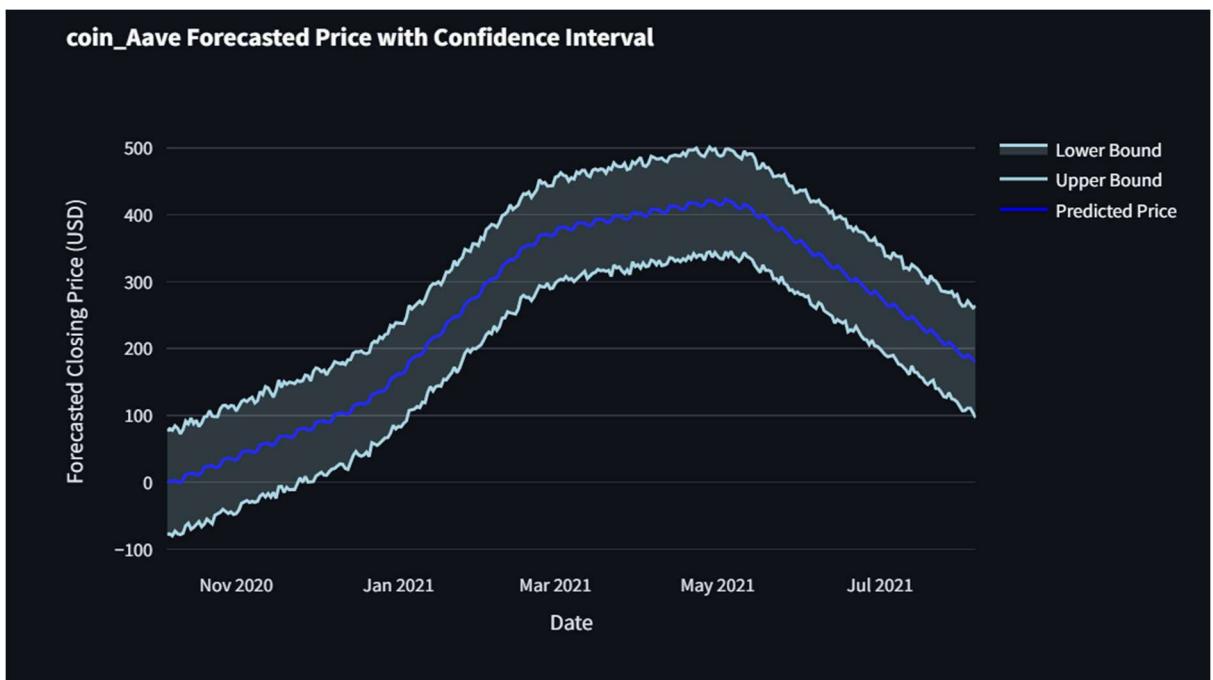
1. How did the historical prices / market capitalizations of various currencies change over time?



2. How big is Bitcoin compared with the rest of the cryptocurrencies?



3. Predicting the future price of the currencies.



4. Which currencies are more volatile and which ones are more stable?

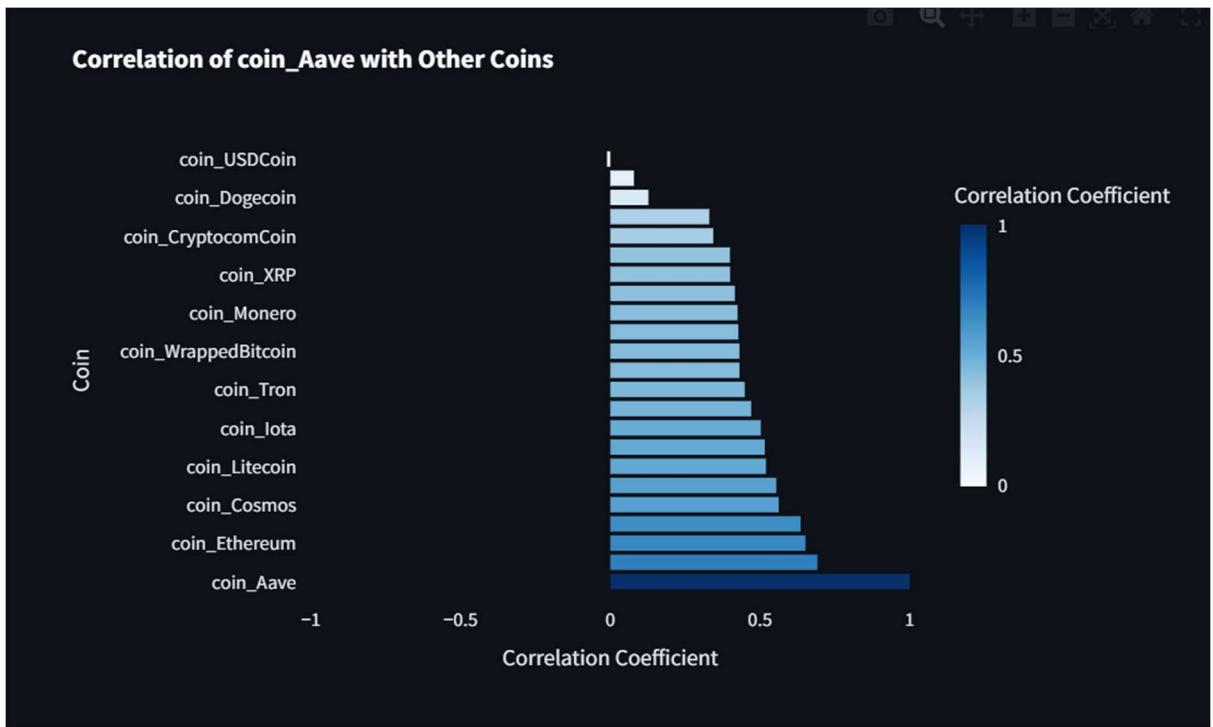
Most Stable Coins:

	Coin	Volatility
19	coin_USDCoin	0.0046
17	coin_Tether	0.0177
2	coin_Bitcoin	0.0426
21	coin_WrappedBitcoin	0.0429
9	coin_Ethereum	0.063

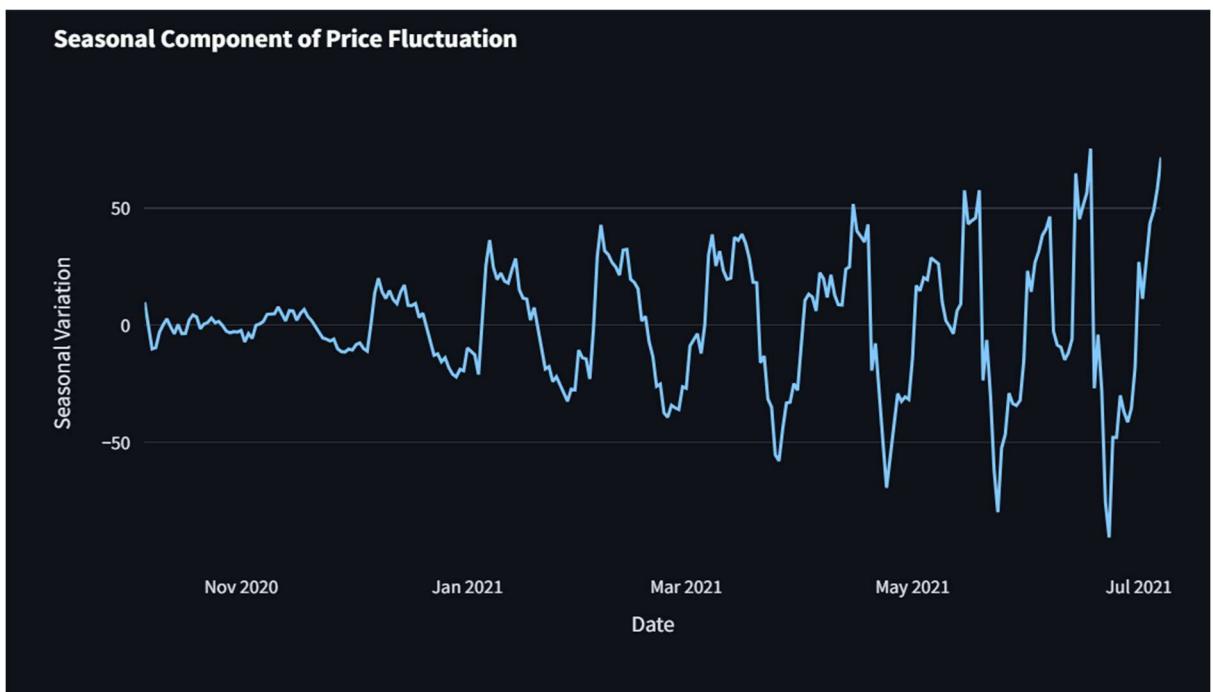
Most Volatile Coins:

	Coin	Volatility
7	coin_Dogecoin	0.1135
18	coin_Tron	0.0953
15	coin_Solana	0.0945
20	coin_Uniswap	0.0913
14	coin_Polkadot	0.0872

5. How does the price fluctuations of currencies correlate with each other?



6. Is there any seasonal trend in the price fluctuations?



Key Features:

- **Time-Series Analysis:** Visualizations of price and marketcap trends per currency.
- **Correlation Heatmap:** Displays the correlation of the selected coin vs the remaining 22.
- **Forecasting:** 30-day price prediction using Facebook Prophet.
- **Volatility Insights:** Highlights most stable and most volatile cryptocurrencies.
- **STL Decomposition:** Detects seasonal trends in prices.
- **Buyer Recommendation:** Based on minimum volatility coin.

Technologies Used:

- Python
- Streamlit for Dashboard UI
- Prophet for forecasting
- Plotly for interactive visualizations
- Statsmodels STL for seasonal decomposition