Cryptocurrency Market Analysis Report

1. Introduction

This report presents a comprehensive analysis of the top 50 cryptocurrencies based on market capitalization. The data is retrieved using the CoinGecko API and continuously updated every 5 minutes in a live Google Sheets document. The primary objective of this study is to track real-time cryptocurrency price fluctuations, market dominance, and trading activity to provide actionable insights into the crypto market.

By leveraging **Google Sheets integration**, users can access real-time data effortlessly over the cloud. The report highlights key patterns, including price changes, market capitalization shifts, and asset performance, to assist in making informed financial decisions.

2. Data Collection

The live data was collected using the CoinGecko API with the following key query parameters:

- vs_currency: USD (prices are in US dollars)
- order: Sorted by market capitalization (market cap desc)
- per page: 50 (retrieving top 50 cryptocurrencies)
- price change percentage: 24h (tracking percentage change in the last 24 hours)
- **locale**: English (default language)

Integration with Google Sheets

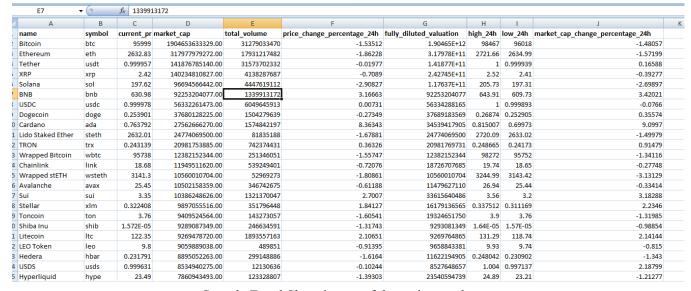
To facilitate real-time tracking, the collected data is pushed to a **Google Sheets document** every 5 minutes using the gspread library in Python. The Google Sheets document provides a structured and interactive view of the latest market data without physically downloading Excel sheet.

The dataset includes the following key attributes:

- Name: The full name of the cryptocurrency (e.g., Bitcoin, Ethereum).
- **Symbol**: The ticker symbol used for trading (e.g., BTC, ETH).
- Current Price: The latest market price in USD.
- Market Capitalization: The total market value of the cryptocurrency, calculated as price × circulating supply.
- **Total Volume**: The 24-hour trading volume, representing the total value of trades executed.

- Price Change Percentage (24h): The percentage change in price over the last 24 hours.
- Fully Diluted Valuation: The estimated market cap if all tokens were in circulation.
- **High (24h)**: The highest recorded price in the past 24 hours.
- Low (24h): The lowest recorded price in the past 24 hours.
- Market Cap Change Percentage (24h): The percentage change in market capitalization over the last 24 hours.

3. Key Insights and Analysis



Sample Excel Sheet image of the script results.

3.1 Top 5 Cryptocurrencies by Market Capitalization

Based on the latest market data, the top 5 cryptocurrencies ranked by market cap (calculated on 23:46 11-02-2025) are:

Rank	Name	Symbol	Market Cap (USD)
1	Bitcoin	ВТС	1,904,653,633,329
2	Ethereum	ЕТН	317,977,979,272
3	Tether	USDT	141,876,785,140
4	XRP	XRP	140,234,810,827
5	Solana	SOL	96,694,566,442

Bitcoin remains the dominant cryptocurrency, maintaining the highest market capitalization.

3.2 Average Price of Top 50 Cryptocurrencies

To understand the overall market trend, we calculated the **average price** of the top 50 cryptocurrencies:

The **average price** of the top 50 cryptocurrencies is approximately **4160.14** USD (calculated on 23:46 11-02-2025)

3.3 Highest and Lowest 24-Hour Price Changes

Cryptocurrencies experience significant volatility. The highest and lowest **24-hour percentage price changes** in the dataset (calculated on 23:46 11-02-2025) are:

- **Highest Price Change (24H)**: (Cardano, 8.36%)
- Lowest Price Change (24H): (Official Trump, -5.04%)

3.4 Market Trends and Observations

- **Bitcoin (BTC)** remains the leading cryptocurrency, with a circulating supply of **19.04M BTC** and a market dominance of over **50%**.
- Stablecoins like Tether (USDT) and USD Coin (USDC) continue to have high trading volumes, indicating their increasing use in transactions.
- **High Volatility**: Some altooins experience rapid price swings, with over **10% fluctuations** in a single day.

4. Conclusion

This analysis provides a real-time snapshot of the cryptocurrency market. **Bitcoin remains the dominant player**, while altcoins exhibit **strong volatility**. The integration with **Google Sheets** enhances accessibility, allowing users to track live data updates and gain valuable insights into market trends.



*The Google sheet is updated when the script is running, to continuously update the sheet day and night the script must run all the time which requires a cloud server. Currently, I cannot arrange a cloud server so I am running the script locally which is updating both the Google Sheet and the Excel sheet.