

# Cryptocurrency Data Analysis Report

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## Introduction

This project involves fetching and analyzing live cryptocurrency data for the **top 50 cryptocurrencies** by market capitalization. The goal is to provide meaningful insights, such as identifying the top-performing cryptocurrencies, calculating the average prices, and understanding trends in price changes. Data is fetched using the **CoinGecko API** and continuously updated in a live Excel sheet every **5 minutes**. The analysis is conducted using **Python libraries** such as Pandas and OpenPyXL.

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## Methodology

- Data Fetching:**  
Data is fetched from the **CoinGecko API**, including key metrics such as name, symbol, price, market cap, volume, and 24-hour price changes. The API parameters ensure retrieval of live data for the **top 50 cryptocurrencies** sorted by market capitalization.
  - Data Analysis:**
    - Top 5 Cryptocurrencies** by market capitalization.
    - Average Price** of the top 50 cryptocurrencies.
    - Highest and Lowest 24-hour Percentage Price Changes**.
  - Data Storage:**  
The data is updated every **5 minutes** and stored in an Excel file (`crypto_data.xlsx`) using **OpenPyXL**.
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## Key Insights and Analysis

- Top 5 Cryptocurrencies by Market Capitalization**

Cryptocurrency Name	Market Capitalization (USD)
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Bitcoin	1,990,086,173,707
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<b>Ethereum</b>	473,015,888,823
<b>Tether</b>	139,724,296,911
<b>XRP</b>	138,647,110,720
<b>Solana</b>	110,036,044,055

2. **Average Price of Top 50 Cryptocurrencies:**  
**\$4,490.32**
  3. **Highest 24-hour Percentage Price Change:**  
**Sui: +31.18%**
  4. **Lowest 24-hour Percentage Price Change:**  
**USDS: -0.11%**
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## Conclusion

This analysis highlights the performance of the **top 50 cryptocurrencies**. **Bitcoin** and **Ethereum** dominate the market by capitalization, while **Sui** has shown significant growth in the last 24 hours. Conversely, **USDS** experienced the largest percentage decline. The live-updating Excel file provides a real-time framework for tracking cryptocurrency trends.

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## Appendix

**Screenshot:** Snapshot of the live-updating Excel sheet ([crypto\\_data.xlsx](#)).

crypto\_data

.xlsx

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## Code Snippet

# Fetch data from CoinGecko API

```
response = requests.get(url, params=params)
```

```
data = response.json()
```

```
df = pd.DataFrame(data)
```

For further details, refer to the full Python script.