# **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.

## Methodology

#### 1. 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.

- 2. Data Analysis:
  - Top 5 Cryptocurrencies by market capitalization.
  - Average Price of the top 50 cryptocurrencies.
  - Highest and Lowest 24-hour Percentage Price Changes.
- 3. Data Storage:

The data is updated every **5 minutes** and stored in an Excel file (crypto\_data.xlsx) using **OpenPyXL**.

### **Key Insights and Analysis**

1. Top 5 Cryptocurrencies by Market Capitalization

Cryptocurrency Name Market Capitalization (USD)

**Bitcoin** 1,990,086,173,707

**Ethereum** 473,015,888,823

**Tether** 139,724,296,911

**XRP** 138,647,110,720

**Solana** 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:

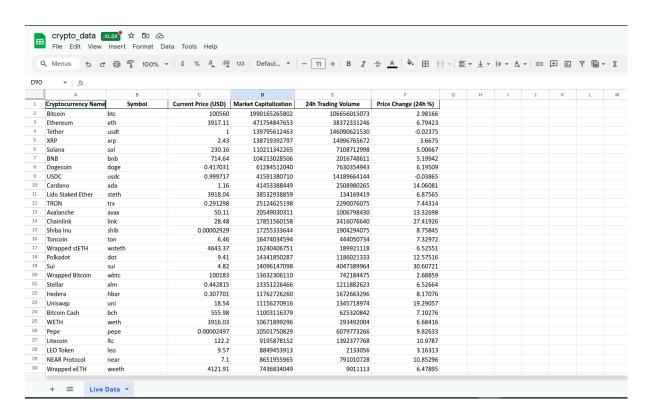
USDS: -0.11%

### 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.

# **Appendix**

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



#### **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.