**Cryptocurrency Data Fetching and Analysis**

**Project Overview**

This project fetches live cryptocurrency data for the top 50 cryptocurrencies using the CoinGecko API, analyzes the data, and updates it in a live Excel sheet every 5 minutes. The project also includes a script for analyzing key insights, such as the top 5 cryptocurrencies by market capitalization and the highest/lowest percentage price changes in the last 24 hours.

**Features**

* **Live Data Fetching:** Retrieves real-time cryptocurrency data from the CoinGecko API.
* **Data Storage:** Saves the fetched data in CSV and Excel formats.
* **Automated Updates:** Updates the Excel sheet every 5 minutes with the latest data.
* **Data Analysis:** Identifies key insights such as:
  + Top 5 cryptocurrencies by market capitalization.
  + Average price of the top 50 cryptocurrencies.
  + Highest and lowest 24-hour percentage price changes.

**File Structure**

├ fetch\_data.py # Fetches live cryptocurrency data

├ update\_excel.py # Updates the Excel sheet every 5 minutes

├ analyze\_data.py # Performs data analysis

├ crypto\_data.csv # Stores the fetched data in CSV format

├ crypto\_data.xlsx # Stores the live updating data in Excel

├ README.md # Documentation for the project

**Installation**

**Prerequisites**

* Python 3.x
* Required Libraries:

pip install pandas requests schedule openpyxl

**How to Run?**

**1 Fetch Cryptocurrency Data**

**Run the following command to fetch the latest cryptocurrency data and save it as crypto\_data.csv:**

**python fetch\_data.py**

**2 Update Excel Sheet**

**Run the following script to update the Excel file every 5 minutes:**

**python update\_excel.py**

**3 Perform Data Analysis**

**To analyze the data and get insights, run:**

**python analysis.py**

**Data Fields**

**The following fields are fetched and stored:**

* **Cryptocurrency Name**
* **Symbol**
* **Current Price (USD)**
* **Market Capitalization**
* **24-hour Trading Volume**
* **24-hour Price Change (%)**