Cryptocurrency Fundamental Analysis Tool

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Team 5 members

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Project Overview

The overall idea for this project is to analyze key fundamental information for BTC, ETH, DOGE and BNB. The goal is to create a user-friendly tool that helps investors make an educated decision on which of the selected 4 coins is a better investment based on fundamental data. We will be using CoinMarketCap, CoinGecko, and CoinMetrics APIs to fetch the information. The data points we will highlight include market cap, volume, circulating supply, total supply, active addresses, and other relevant information.

Research Questions

1. How often should the coin data be refreshed (including USD exchange rates)?
2. How coin fundamentals have changed over time (market cap, volume or supply, etc.)?
    a. https://thecoinperspective.com/compare/bitcoin?fx=USD&vs=bitcoin
3. Should we display a coin's realistic market cap numbers as well? How detailed will this project be? How will it be organized?
4. Is it useful to show a coin's market cap rank, liquidity score, and all time highs/lows?
5. Can fundamental analysis help investors make better investment decisions?

Datasets to be Used

Coin Metrics

https://docs.coinmetrics.io/api/v4

We will use Coin Metrics API to access on-chain analytics.

Coin Metrics organizes the world's crypto data and makes it transparent and accessible.

Breakdown of Tasks

I. Front-end/UI

Jupyter Notebook dashboard (voila

We aim for a two-part tool:

First, a snapshot of current coin fundamentals (latest price, market cap, volume, (# of coins, real-time price, and value in USD)

Second, historical graphs of coin fundamentals showing the change over time.

II. Data Collection from Coin Metrics

All participants will collaborate together and will determine which features are needed for this project.

And using a pandas data frame we can see what the given information is.

After we determine which features we would like to incorporate for our project, we will divide the tasks up with each team member.

III. Presentation

Each participant will present an assigned portion of the project.

The main focus of our project is the conversion calculator. We will break down the presentation based on how we completed the project.

- Planning for the project
- Data collection and research
- How we used certain APIs
- Any calculations we had to incorporate for the converter
- Additional added features (current market cap, volume, circulating supply, and total supply)
- Etc.

Project Roadmap and Checkpoints

Next steps for Wednesday 4 PM

1. Check the APIs and choose which one has better documentation, data, ease of use..
    a. Coin Metrics
2. Choose which fundamentals we wish to display
    a. Price (latest and historical)
    b. Market Cap
    c. Volume
    d. # of coins in circulation
3. What timeframes to use for the graphs
    a. 3 years

Check data, start documenting the process (clean up data, prep the data()

https://projects.trilogyed.com/fintech/

Accomplishments as of Wed, Aug 11:

1. Retrieved information via Coin Metrics API
2. Created dataframe with price information
3. Plotted price information

Next Steps:

1. Create dataframes for the remaining fundamental metrics
2. Present the data in a dashboard -> What is the story we are trying to tell?
    a. Create a wireframe.
    b. Snapshot of current fundamentals
    c. Graphs details: data, type and design
        i. Add rolling (moving-average) lines?
3. Can we make some correlations or inferences with historical data?
4. Complete documentation (code and README)

Key takeaways after the call with Donna on Friday August 13th:

1- We designed a wireframe dashboard with fundamental metrics and graphs. Link: https://whimsical.com/project-1-bootcamp-8AcsZg3sdMnkdDCwojTMim

2- We defined the metrics. @Aquiba Benarroch and @Donna Salinas will lookup references here: https://docs.coinmetrics.io/info/metrics and add to whimsical dashboard

3- @Donna Salinas will run the get_data function in the Notebook and create the DataFrames for each metric.

4- @Donna Salinas will build a new DataFrame with the key fundamental information

5- @Aquiba Benarroch will comment the code for easy reading

Our next checkpoint is on Monday before class at 3 or 4 PM - any preference?

If the above steps are done, we could spend some time analyzing the data to tell the story of China's BTC crackdown from a fundamental perspective.

Next steps after Monday Aug 16th Class

Latest changes were pushed to GitHub by Aquiba

Aquiba created the DataFrame for the latest fundamental information; however, I am not sure we'll have time to make it pretty like the plot. I'll ask my tutor tomorrow for help. Otherwise, I say to just present the interactive graph (which works pretty well IMO)

I also added a few bullet points to the presentation, and two case studies with graphs. Let me know if everything makes sense

Let's accomplish the following before tomorrow 4 PM:

- Finish presentation @Moustafa Moussa
- Finish Readme @Donna Salinas
- Polish code @Aquiba Benarroch

The meeting will consist of:

- Reviewing final code
- Reviewing presentation and readme file
- Deciding on presentation speakers
- Pitching the presentation

Meeting before Presentation day is on Wed at 4:30 PM

Last steps before submitting Repo

1- @Donna Salinas include code to get rid of scientific notation (I think I uploaded a local version last time)

2- Finish README file - @Donna Salinas were you able to work on this further?

3- PDF presentation and add to GitHub