

An Opportunity Met - Crypto Dashboard Project

Project Overview:

This project focuses on a user new to cryptocurrency, who is not savvy with investing or crypto markets. We have developed a simple, easy to navigate dashboard to provide the user with a quick look at price data, trade indicators and exchange prices, including explanations of their significance. The aim is to inform and educate the user, with future development in revenue building options.

Target Market:

"57 percent of all U.S. crypto owners are millennials, despite representing 30 percent of the overall population." with Gen Z holding 13 percent and Gen X holding 20 percent.¹ Their adoption of this technology has created the momentum needed to push the cryptocurrency into the mainstream. With traditional financial institutions now running publicized pilot programs² in cryptocurrency, and the expected 10 year wealth transfer of over \$68 trillion from their predecessors by 2030³, there is a huge percentage of the US population expected to start moving into crypto markets over the next 10 years.

Questions, we looked to answer:

1. I am new to crypto currency, what coins are out there and what kind of data is being collected on them?
2. Besides price trends, what criteria should I look at when evaluating coins?
3. What metrics are used to indicate buy/sell opportunities?
4. Are all exchanges the same? Why should I buy my coin on one exchange versus another?

Design Details:

Streamlit is used as the deployment platform for this dashboard app. [Streamlit](#) is an open-source Python library⁴ that is well documented and easy to use for machine learning and data science app deployment. Python coding language was used to write the functionality of the program. Coingecko is the data source for each coin and exchange, due to its cost-free and password free access to data. www.coingecko.com

At this time the Dashboard project is available open-source on GitHub:

<https://kausarhina-crypto-dashboard-multipage-appapp-dev-fmv0f9.streamlit.app/>

Dashboard Details:

The Crypto Dashboard is a basic prototype that could be developed in many directions as future opportunity presents itself.

¹ Morning Consult - Analyst Report Q1 2022, [The State of Consumer Banking & Payments](https://go.morningconsult.com/rs/850-TAA-511/images/220120_State_of_Consumer_Banking.pdf)
https://go.morningconsult.com/rs/850-TAA-511/images/220120_State_of_Consumer_Banking.pdf

² Reuters.com - <https://www.reuters.com/markets/currencies/banking-giants-new-york-fed-start-12-week-digital-dollar-pilot-2022-11-15>

³ Coldwell Banker - A Look at Wealth 2019: Millennial Millionaires - Accessed Nov 2021
<https://blog.coldwellbankerluxury.com/a-look-at-wealth-millennial-millionaires/>

⁴ Contains bundles of code that can be used repeatedly in different programs. It makes using Python coding language coding simpler for the programmer

1. The Welcome Page, gives the user a quick-view of the top 50 coins by market cap⁵ and their current trends in an easy to read table.
 - Numbers in green indicate positive changes and red indicate negative changes. The green box and red box in each column indicate the highest value and lowest value, making the datatable easy to navigate. Nothing overwhelming, just straight-forward data points.
2. The Coin Page dives deeper into coin trend analyses.
 - The user is able to select a coin from the top 10 coins by market cap, and a timeframe via the sidebar menu. The price history of the chosen coin over the chosen timeframe is displayed graphically, allowing the user a first look at price trends.
3. The Exchange List page displays a table of certified exchanges that buy and sell cryptocurrency. The table includes name, name id, the origins, the year established, the trade volume in the last 24 hours in Bitcoin, and the team's trust score and rank.
 - The user also has the choice to select a coin to see what the current price is through that exchange. Additional information is included in the tabs below the table detailing what certain exchanges offer and how each one can be beneficial to the user.
4. The Notifications & Indicator pages touch on trading indicators. These are mathematical calculations done with a coin's price to identify certain signs and trends of the coin's past performance. When plotted graphically it allows a user to extrapolate what to expect in the coin's future performance.
 - The indicators currently included on the dashboard are Simple Moving Average (SMA), Weighted Moving Average (WMA), Bollinger Bands, Reset Settings Index (RSI) and Moving Average Convergence/Divergence (MACD). These trade signal statistics are provided with short explanations of their significance and also represented graphically to highlight trends.
5. Another functionality of the Dashboard is to collect email addresses and coin preference to begin creating a user network.
 - On the Indicators page there is a checkbox option in the sidebar menu to have email notifications sent to the user with important information on their top 4 coins of interest. The email and user coin preference is saved in a database to access for sending email notifications.

Future Functionality:

As new users of all backgrounds, from all around the world, start researching crypto we will add functionality to meet the growing interest. Future development could include:

1. refine data sourcing
2. smart order routing in buy/sell functionality
3. coin/ portfolio recommendations based on machine learning modeling
4. arbitrage opportunity notification for subscription users

Market Competition:

There are many cryptocurrency web pages available with tons of functionality, coingecko and alpaca.markets, are two examples. These sites have so many options to choose from that it can

⁵The total dollar market value of a company's outstanding shares of stock

become very overwhelming to a 'new-to-crypto' user who just needs the basics. This is where the Cryptocurrency Dashboard finds its niche.

Team Members:

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Summary:

This is a simple to navigate dashboard for users who are starting their journey into cryptocurrency trading markets. The dashboard educates and informs the user without overwhelming information or options. It is designed to allow easy functionality additions as user demands grow. We feel this project has a great deal of current utility and future potential as generational wealth from the Baby Boomer generation begins to trickle down to Gen X, Gen Z and Millennials; the adoption of blockchain technologies and cryptocurrency is expected to increase exponentially.

There is an avalanche of cryptocurrency newbies coming, with inheritance money to invest. Cryptocurrency Dashboard is here to meet the opportunity from the beginning.