



PERSONALISED CRYPTOCURRENCY TRACKER-CRYPTOSCOUT

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Abstract: Network crypto currencies have emerged as an important investment platform. They work on the Distributed Ledger technology known as Block chain. Cryptocurrencies are volatile in nature as their values change rapidly. That's why they thought of creating a platform to monitor the performance of cryptocurrencies. The platform will monitor the performance of cryptocurrencies and provide information on changes in the price of cryptocurrencies. We used some popular programming languages python to develop the platform, as well as an API to access crypto-currency data. The platform we built provides insight into the functionality of cryptocurrencies with an attractive GUI. The crypto-currency data we receive is updated on a daily basis, and includes price changes on a 24-hour and 1-week basis. This includes the valuation of crypto-currencies. The main goal of building this platform is to provide the user with easy access to crypto insights. We designed our UI in such a way that it would be easy for the user to find each page without any problems.

Index Terms - Editor, API, Cryptocurrency, Bitcoin, Bitpay.

I. INTRODUCTION

The word "crypto currency" is used to refer to a specific type of digital currency that is intended to operate as a medium of exchange through the utilization of computer networks, as opposed to depending on centralized authority such as governments or financial organizations. The word "crypto currency" is used to refer to a specific type of digital currency that is intended to operate as a medium of exchange through the utilization of computer networks, as opposed to depending on centralized authority such as governments or financial organizations. The individual's possession of a certain currency A digital ledger is a specific kind of computerized database that makes use of robust encryption to protect transaction records, regulate money manufacturing, and authenticate the transfer of coin ownership. The fact that they are referred to as crypto currencies does not change the reality that they are not taken into consideration. Crypto currencies are regarded as a category of asset despite the fact that they are also categorized as commodities, securities, and currencies Crypto currencies are not issued by any centralized authority, nor do they exist in any form that can be touched (like paper currency). In most cases, crypto currencies make use of decentralized checks rather than the digital money issued by central banks (CBDCs). In 2009, bitcoin was the first decentralized crypto currency to be made available to the public in the form of open-source software. As of March 2022, there are roughly 9,000 new crypto currencies on the market. There are about 70 market segments with market capitalizations greater than \$1 billion. Decentralized coins are created collectively by the whole crypto currency network. Bitcoin does not have intrinsic value like gold in that it cannot be used to make

physical objects like jewelry that have value. Nevertheless, value continues to exist due to trust and acceptance.

Current legal and financial structures are not designed with a technology like this in mind. Financial institutions are built off of much older forms of currency. In some ways, it is comparative to the computing industry. The baseline of computing still relies on transmitting and processing 1's and 0's, providing only two dimensions of input. Yet all of our current technology uses this technologically archaic system due to adoption, cultivation, and lack of need for newer systems. If cryptocurrencies became the global norm for transactions, long standing systems for trade would need to be completely reformed to deal with this type of competition. For this reason, cryptocurrencies could possibly be the single most disruptive technology to global financial and economic systems.

II. LITRETURE REVIEW

1. There are a number of existing cryptocurrency trackers on the market. However, many of these trackers are limited in their features or are not user-friendly. The "Advanced Personalized Cryptocurrency Tracker - CryptoScout" project aims to address these limitations by developing a platform that offers a wider range of features and is more user-friendly than existing solutions. The following are some of the key features that will be included in the "Advanced Personalized Cryptocurrency Tracker - CryptoScout": Real-time price tracking for a wide range of cryptocurrencies. Portfolio management tools. Advanced analytics features. Social integration and collaborative features. Advanced user customization and accessibility. Multilingual support and global adaptability.
3. Bitcoin, the world's most common and well known cryptocurrency, has been increasing in popularity. It has the same basic structure as it did when created in 2008, but repeat instances of the world market changing has created a new demand for cryptocurrencies much greater than its initial showing. By using a cryptocurrency, users are able to exchange value digitally without third party oversight. Cryptocurrency works on the theory of solving encryption algorithms to create unique hashes that are finite in number. Combined with a network of computers verifying transactions, users are able to exchange hashes as if exchanging physical currency. There is a finite number of bitcoin that will ever be generated, preventing an overabundance and ensuring its rarity.
4. Bitcoin has strength by design to make it a viable currency that has elevated it in status over the years, more notably the fixed limit of bitcoin that will exist. Bitcoin will be mined with diminishing returns every four years until the maximum number of bitcoins are reached: a total of 21 million (King, 2013). This aspect of Bitcoin is important for its value. Due to the limited amount of bitcoins, it will never become inflated from an overabundance of bitcoins. Also, bitcoin and other cryptocurrencies are generally regarded as being protected from inflation originating from national government changes or restrictions (Magro, 2016). This creates a "safe haven" for investors to put their wealth into, as it generally does not lose value based on inflation. Bitcoin is quickly showing its strength as a refuge against inflating national currencies. However, as is the case with most commodities, the price can fluctuate wildly based on many other external factors. The combination of demand for a safe haven option and its price volatility helped Bitcoin to become the best performing currency of 2015 using the US Dollar Index (Desjardins, 2016). This means that Bitcoin was the highest valued currency in the entire world at the end of last year. This is no small feat in a global economy with powerhouses like China and the United States running the landscape.
5. Cryptocurrency is in a unique position as a forerunner in a possibly transformative technology to long standing financial systems. By its very nature, it is able to fill gaps in current financial technologies and be able to help solve traditional banking problems by being a peer-to-peer system. Napster, another peer-to-peer system, transformed the music industry by cutting out the middle man (Kelly, 2014). Transformative technologies start by solving a specific problem in an industry. For instance, cryptocurrencies are poised to help remediate the problems related to unbanked consumers. Significant portions of the population in developing countries are unbanked. In Latin America, 60%

of 600 million inhabitants have no access to bank accounts (Magro, 2016). Bitcoin's technology allows for individuals to exchange currency without needing a third trusted party, like a bank, to oversee the transaction. All that is needed to use Bitcoin is a mobile phone, which 70% of Latin Americans do have access to (Magro, 2016). Due to bitcoin's ad-hoc networking capability, two users can trade bitcoin with each other by scanning QR codes displayed on their phones printed out by the application. This is a truly unique solution to a problem that has existed for many years for some people. This would invariably increase as the user base grows, so the demand for better cryptocurrency network and applications will come to the forefront. There is an enormous market for potential developers to create these applications, as this technology could affect any industry that relies on a trusted third-party clearing system (PwC, 2015). Any developers who increase usability through application and GUI improvements to bitcoin would be very successful. Bitcoin's progression into becoming a transformative technology is driven by its ability to solve long standing problems, combined with a supportive and growing community of developers and users.

6. Bitcoin has quite a few internal weaknesses that are part of its design and cannot easily be modified. The public ledger, or block chain, means that every user can see every transaction. There is semi-anonymity, in that the owners of bitcoin wallets cannot be identified outright, but it is slightly nerve-racking for some potential adopters. The public block chain is shared with all users, which means that it is susceptible to attacks due to easy access (King, 2013). So far, the Bitcoin network has been subjected to multiple "stress tests" that were essentially DDoS attacks (Hileman, 2016). These "tests" were launched by exchanges and miners to attempt to prove a point about Bitcoin's design: that the network cannot handle a high load transaction rates. The mere fact that the participants of Bitcoin's operation can bring the network down to prove a point is an unfortunate design feature of the code. These two aspects of Bitcoin's design are integral to operation, and cannot be changed. Adoption by reluctant users must be in spite of these attributes.
7. Bitcoin has developed a questionable reputation through recent events. Stories like Silk Road can portray a negative image of digital currency in general, not just Bitcoin. Silk Road was an online marketplace buried in the dark-net, which allowed thousands of drug dealers and nearly a million customers to make illegal drug deals. Bitcoin was their primary means of transaction, due to the lack of government tracking and semi-anonymity. It ran from 2011 to 2013, and racked up nearly one billion USD in sales (Bearman, 2015). People want criminals to have justice meted against them, so the semi-anonymity attribute of bitcoin seems negative to law abiding citizens. Without positive marketing towards the value of semi-anonymity for normal users, the general user base will think that cryptocurrencies are only used by criminals.
8. Businesses are beginning to see the value in using cryptocurrencies for international transactions, especially when transactions need to occur quickly in response to an emergency. Cryptocurrencies are solely positioned to solve this problem thanks to the speed and ease of transaction in the peer-to-peer system. Money can be wired internationally, but typically arriving days after being sent and not for the full amount (Team, 2016). The transaction can be hit with any number of unexplained fees as it crosses borders, making it difficult to send the correct amount to another business. A good example of this type of emergency need is an online company who is suffering from a denial-of-service attack and is looking to get immediate protection from a network security company (Team, 2016). In this scenario, speed of transaction is of the essence, for every minute that the company's website is down, profits are being lost. Cryptocurrency has a major advantage over traditional currencies thanks to its agility in making fast peer-to-peer transactions, especially in international business-tobusiness scenarios.
9. Internet marketplaces have been thriving and are true contenders to traditional brick-and-mortar stores. Amazon.com has grown to a degree that seems almost unexpected. They have even begun to hire "on-demand" delivery drivers, who use their own personally owned vehicle to deliver standard packages (Saito, 2016). This type of growth shows an attempt to further tighten control of the company's logistics costs, which expand exponentially with increased business. Ebay.com already uses a paying system that is similar to Bitcoin called PayPal, and has been very successful in using it to facilitate all purchases made on its site. Silk Road was another example of a thriving online market, albeit it's very illegal nature. It connected buyers and sellers who mostly used bitcoin to complete transactions. This marketplace showed how a digital currency can connect buyers and sellers without much interference by presiding governments and still succeed. Online shopping is thriving, and bitcoin is poised to extend its reach with efficient and easy payments for both vendors and customers. General purpose online shopping for individuals accounted for nearly 23 percent of

transactions processed by Bitpay in the second quarter of 2015 (Kasiyanto, 2016). Cryptocurrency has the advantage over traditional card-based for the vendor in that it eliminates those fees.

10. Bitcoin has quite a few hurdles to clear for user acceptance to become widespread. The value fluctuations that plague cryptocurrencies puts doubt in users, as well as investors. Ultimately a limiting factor in cryptocurrency is general acceptance.
11. The lack of central ownership of cryptocurrencies means that any attempt to remediate this marketing problem using advertisements could theoretically help the investing company's competition. This is not an ideal situation for a marketing plan. Cryptocurrencies have also seen fraud and theft, generally due to faulty system setups by exchange companies. These hacks generally make the news, and can easily convince the layman that they are unsafe locations to put their money. There is also a large gap in laws that cover the use of cryptocurrency. As long as cryptocurrencies remain in an area not generally covered by law, user acceptance will be limited. User's need to trust that any transactions using cryptocurrencies are legal and binding. Markets and governments are slow to react to the new technology. Ultimately, all of these factors limit consumer's trust in bitcoin and cryptocurrency.

III. RESEARCH METHODOLOGY

Identify the Data Source: The first step is to identify a reliable data source for getting real-time price data for cryptocurrencies. This can be done by using an API provided by a cryptocurrency exchange or a third-party provider. **Choose a Web Development Framework:** Once you have identified the data source, the next step is to choose a web development framework to build the application. Some popular frameworks include React, Angular, and Vue.js. **Design the User Interface:** The next step is to design the user interface for the application. The UI should be simple, intuitive, and easy to use. It should display real-time price data for different cryptocurrencies in a clear and organized manner. **Implement Real-Time Data Streaming:** To ensure that the application displays real-time price data, you will need to implement real-time data streaming. This can be done using websockets or a server-sent events (SSE) approach. **Integrate Payment Gateway:** If you want to allow users to buy and sell crypto currencies using the application, you will need to integrate a payment gateway. Popular payment gateways for cryptocurrency include Coinbase, Bitpay, and CoinPayments. **Test and Deploy:** Once the application has been developed, it should be thoroughly tested to ensure that it works as expected. Once you are satisfied with the testing results, you can deploy the application to a web server and make it available to users. **Maintain and Update:** Finally, it is important to maintain and update the application regularly to ensure that it continues to function properly and meets the evolving needs of users. This includes fixing bugs, adding new features, and keeping the application up-to-date with the latest security patches.

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V. CONCLUSION

A real-time price tracker web application for cryptocurrency is an essential tool for both novice and experienced traders. Such a web application should be user-friendly, intuitive, and provide real-time data on various cryptocurrencies, including Bitcoin, Ethereum, and other altcoins. Furthermore, it should have robust security measures to ensure the safety of user data and protect against hacking attempts. The application should also be compatible with various devices, including desktop computers, laptops, tablets, and mobile phones. Overall, a real-time price tracker web application for cryptocurrency is a valuable tool for anyone interested in trading cryptocurrencies. It can help users stay up-to-date on the latest market trends and make informed decisions about buying and selling cryptocurrencies.

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