A Mini Project Report on

CryptoVest

(Crypto Currency and Stock Market analysis)

T.E. - I.T Engineering

Submitted By

Nishank Jain	**20104046**
Jaykumar Nayi	**20104005**
Anish Bhosale	**20104033**

Under The Guidance Of

Prof. Roshna Sangle

DEPARTMENT OF INFORMATION TECHNOLOGY

A.P.SHAH INSTITUTE OF TECHNOLOGY

G.B. Road, Kasarvadavali, Thane (W), Mumbai-400615

UNIVERSITY OF MUMBAI

Academic year : 2022-23

CERTIFICATE

This to certify that the Mini Project report on **CryptoVest** has been submitted by 20104046 (Student ID), 20104005 (Student ID) and 20104033 (Student ID) who are a Bonafede students of A. P. Shah Institute of Technology, Thane, Mumbai, as a partial fulfilment of the requirement for the degree in **Information Technology**, during the academic year **2022-23** in the satisfactory manner as per the curriculum laid down by University of Mumbai.

Prof. Roshna Sangle
Guide

Prof. Kiran Deshpande
Head Department of Information Technology

Dr. Uttam D.Kolekar
Principal

External Examiner(s)
1.
2.

Place: A.P.Shah Institute of Technology, Thane
Date:

ACKNOWLEDGEMENT

This project would not have come to fruition without the invaluable help of our guide **Prof. Roshna Sangle**. Expressing gratitude towards our HOD, **Prof. Kiran Deshpande**, and the Department of Information Technology for providing us with the opportunity as well as the support required to pursue this project. We would also like to thank our teacher Ms. Yaminee Patil who gave us her valuable suggestions and ideas when we were in need of them. We would also like to thank our peers for their helpful suggestions.

ABSTRACT

Cryptovest is the web application which helps the user in developing the knowledge about the cryptocurrency which helps them investing in cryptocurrency. This system contains all the needed features required to become a pro in this cryptoworld. This project contains the latest news about the cryptocurrency along with graphical representation of the trends in the cryptocurrency and this representation can be downloaded by the user which helps them in future prediction. It also provides the how much volume of cryptocurrency has been exchanged in a day. This project includes a feature of cryptoprediction which has been a demerit in other system where it predicts the future price about cryptocurrency. This project mainly focus on providing the detailed and latest information about the cryptocurrency.

TABLE OF CONTENTS

Chapter 1

Introduction:

We are living in a digital world where everything is heading towards digitalization. One of such digital payment sector is cryptocurrency. Investing in this currency is becoming popular because of its security. So, Cryptovest is a web-application which help the users to get various information about the different cryptocurrencies. This web-application includes charts of particular cryptocurrency and also references about that currency. Cryptocurrency help to get rid of the dependency of traditional bank system and also keeps the track of all the transactions taking place and uses the blockchain technology. Cryptovest involves the prediction of price of cryptocurrency which makes differ from most of the website. This system show the information regarding the coin which are trending now-a-days and provide the detail information about it.

1.1.Purpose :

Instead of being physical money carried around and exchanged in the real world, cryptocurrency payments exist purely as digital entries to an online database describing specific transactions.

1.1.1 Enhance Business Processes: Virtual currency offers a great opportunities for companies and operators to monetize their applications and then increase their revenues. There are many types of Cryptocurrency that are implemented in different platforms including Cryptocurrency in social networks, Cryptocurrency in social games, loyalty points and Cryptocurrency in peer to peer networks. These platforms can be classified into two main categories, centralized cryptocurrency platforms and decentralized cryptocurrency platforms.

1.2.Problem Statement :

The scam which took place years ago took the people's trust from the traditional banking system. These banks sometimes not capable enough to keep the record of all money transaction and money were not safe. Cryptocurrency helps in solving these problems by digitalizing the money and keeping the track of all the transactions.

1.3.Objectives :

The objective of cryptocurrency is to remove all the issues that come with traditional banking. There are no limits to the money you can transfer using bitcoin, accounts are almost impossible to hack because you are not using a financial institution , and there isn't a central point of failure.

To make user interfaces that are user friendly and attractive which helps user investing in cryptocurrency.

To provide the information regarding the coins that are trending in market.

To provide updated market price and references about the cryptocurrencies .

To provide the graphical representation which help the users to study the upcoming trends in market.

To remove the dependencies of traditional banking.

To develop interest in user by providing them with latest news.

1.4. Scope :

The main purpose of cryptocurrency is to reduce the risk involved in traditional currency.

To provide with personalized portfolio.

To provide with proper information and to urge people investing in cryptocurrency.

Providing the cryptocurrency prediction which helps the user to make decision accordingly.

Chapter 2

Literature Review :

Cryptocurrencies have emerged as important financial software systems. They rely on a secure distributed ledger data structure; mining is an integral part of such systems. Mining adds records of past transactions to the distributed ledger known as Blockchain, allowing users to reach secure, robust consensus for each transaction. Mining also introduces wealth in the form of new units of currency. Cryptocurrencies lack a central authority to mediate transactions because they were designed as peer-to-peer systems. They rely on miners to validate transactions. Cryptocurrencies require strong, secure mining algorithms. In this paper we survey and compare and contrast current mining techniques as used by major Cryptocurrencies. We evaluate the strengths, weaknesses, and possible threats to each mining strategy. Overall, a perspective on how Cryptocurrencies mine, where they have comparable performance and assurance, and where they have unique threats and strengths are outlined.

Cryptocurrencies have transpired as one of the trending financial software systems. They depend on a secure and consigned ledger data structure; mining being an indispensable part of such systems. Mining reconsiliates records of past transactions to the distributed register known as the Blockchain, that allows users to reach secure, robust and concord for each transaction. Mining also introduces wealth in the form of new units of currency named as “bitcoins”. Cryptocurrencies lack a central delegate or authority to mediate transactions because they were designed as peer to-peer end sub-systems. They rely on miners to validate and scrutinize their transactions. Hence Cryptocurrencies require a strong, secure mining algorithms. In this article we survey, compare and contrast the current mining techniques as used by major Cryptocurrencies. We scrutinize the strengths, weaknesses, and possible threats to mining strategy. Overall, a perspective on how Cryptocurrencies mine the datasets, where they have comparable performance and assurance, and where they have unique threats and strengths are outlined.

Cryptoverse is an existing system through which we got an idea about developing the website which contain more features than the current existing system which attract the user The application is developed under the React framework and GUI made is easily accessible by users. This application provides information to the user but it lags because the information provided in this application is minimal so the user have to visit other websites for getting more knowledge. This system has used Ant Design, Redux,Chart.js libraries.

The advantage of this system is that it provide information regarding all the cryptocurrency and the latest news but this information is not sufficient for the user who are the beginner

traders. By the researching into this we developed an web-application where apart from this features we have shown which are the top 6 trending coins in the market with all time high and low value of cryptocurrency and the main features we have introduced the cryptoprediction which predicts the future price of the cryptocurrency and we have also introduced the feature of downloading the charts of the trends in cryptocurrency.

So the disadvantage of the existing system we have studied and tried to implement in out project which will helpful to the user.

Cryptovest provides information regarding all cryptocurrencies as well as all exchanges of cryptocurrencies. The main advantage of this system is that it allows the user to see the predicted value of specific cryptocurrency as well as visual representation of the trends in the cryptocurrency market. The disadvantage of this system is that the user can view the predicted value of limited cryptocurrencies.

Chapter 3

Proposed System :

Due to inavailability of banking system for keeping the transaction secure and scam taking place in the banks has lost the peoples trust just after a new technology called as Blockchain technology came in the market and by using technology cryptocurrency a digital currency came into market.

To provide a user with information regarding the cryptocurrency Cryptovest is been developed. Cryptovest provides many features regarding cryptocurrency. There were many difficulties occurred while developing it such as choosing the api using it and deployment of real time data which is essential thing.

3.1. Features and Functionality :

Cryptovest provides the features for exploring the cryptocurrency. It includes several functionalities describes as below:

- To make user interfaces that are user friendly and attractive
- To help the users for investing in cryptocurrency
- To provide the information regarding the coins that are trending in market
- To provide updated market price and references about the cryptocurrencies
- To provide the charts which help the users to study the upcoming trends in market
- To remove the dependencies of traditional banking.
- To help user in viewing the future predicted values of cryptocurrencies.

Chapter 4

Requirements Analysis :

Requirement analysis is a software engineering technique that is composed of the various tasks that determine the needs or conditions that are to be met for a new or altered product, taking into consideration the possible conflicting requirements of the various users.

Functional requirements are those requirements that are used to illustrate the internal working nature of the system, the description of the system, and explanation of each subsystem. It consists of what task the system should perform, the processes involved, which data should the system holds and the interfaces with the user. The functional requirements identified are:

Choosing the right Api: By choosing the right Api key helps in showing the real time data.

Providing the news: providing the latest about all cryptocurrency

Graphical view of charts: representation of charts

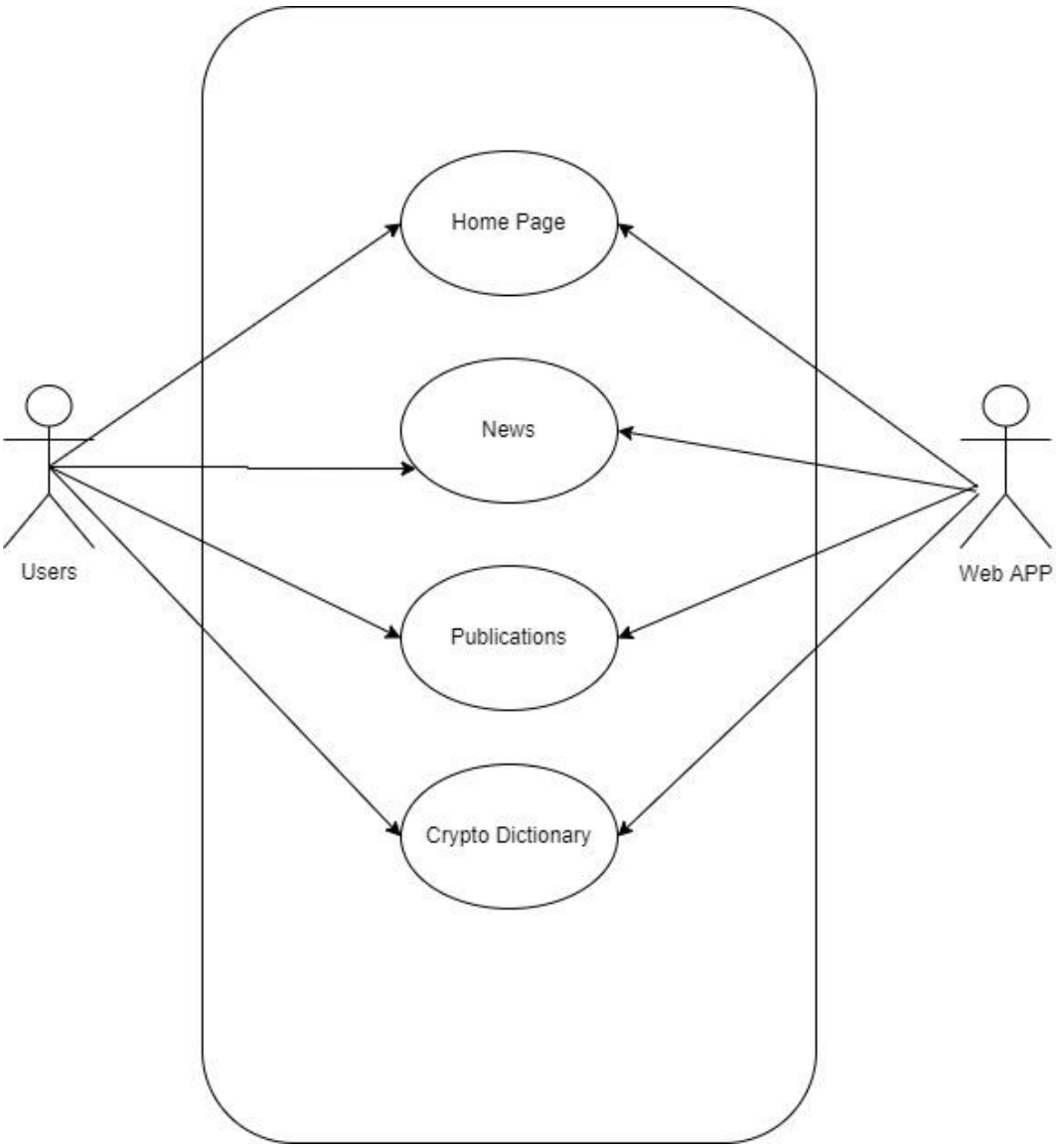
Exchanges: How much volume of cryptocurrency exchanged

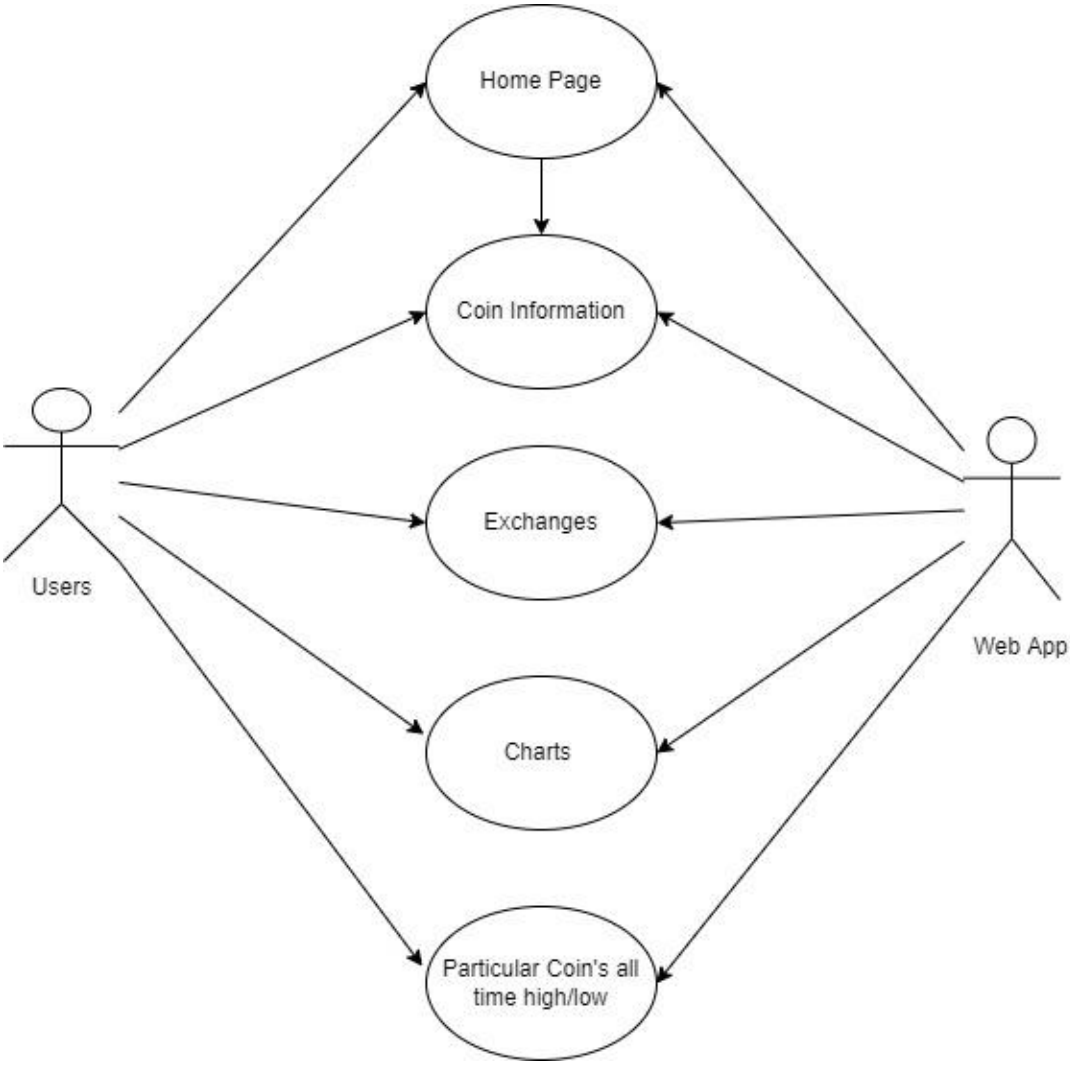
Prediction: predicting the future price of a coin

Chapter 5

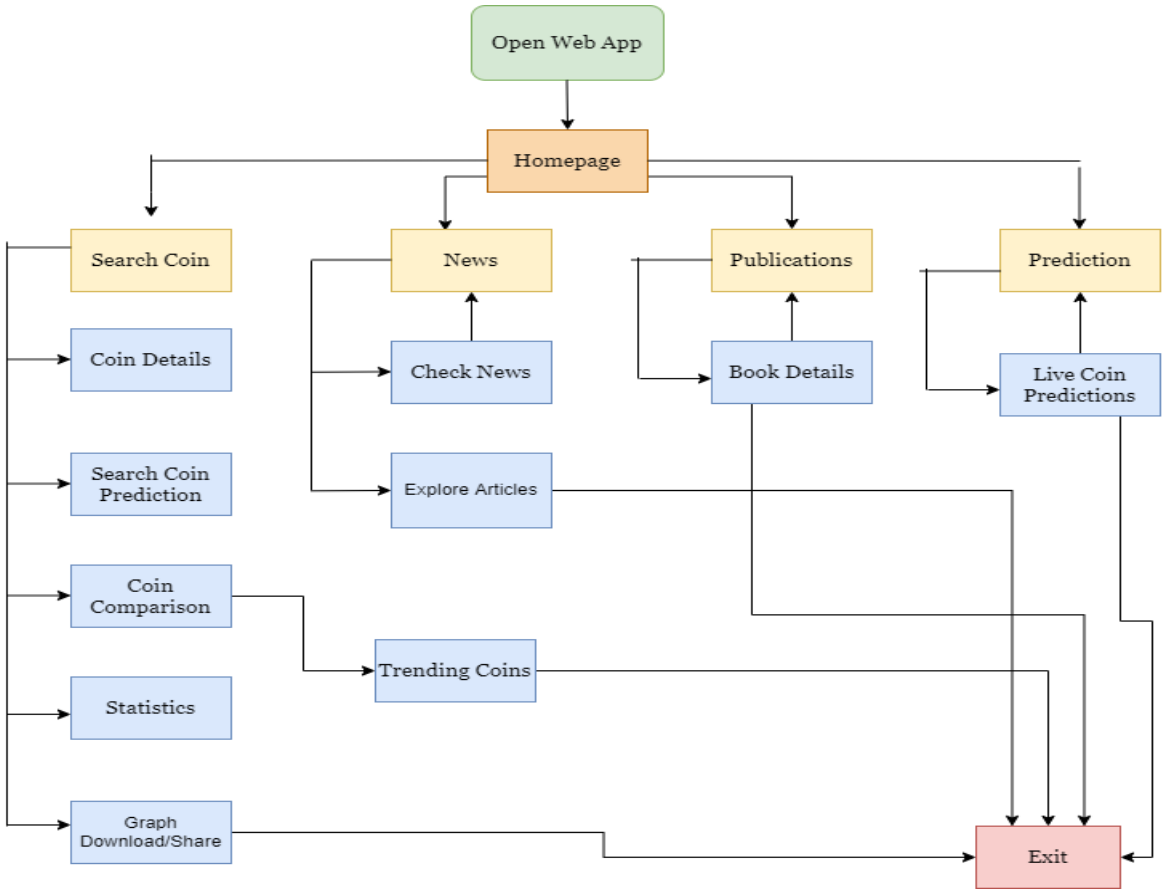
Project Design :

5.1.Use Case diagram




Home Page
Coin Information
Exchanges
Charts
Particular Coin's all time high/low
Users
Web App

5.3.System Architecture



Chapter 6

Technical specificaion :

Languages Used : HTML, CSS, JavaScript, ReactJS, JQuery, Cheerio, Bootstrap.

API : Coingecko, CryptoCompare

Webscraped from www.cryptopredictions.com

Chapter 7

Project Scheduling :

Group Member	Time duration	Work to be done
Nishank Jain Anish Bhosale Jaykumar Nayi	1st week of August	**Implementing 1st module/ functionality**. Designing the home page with information regarding cryptocurrencies.
	3rd week of August	**Attractive GUI** This will consist of the main page where user will have the following options: • Cryptodictionary page • About us • FAQ
	2nd week of September	**Implementing 2nd module/ functionality** (designing news page and exhanges page): Here the users can access all the Facilities

	By the end of October month	**Implementing 3rd module** Showing the predicted cryptocurrency values by webscraping

Chapter 8

Implementation:

Description:

The following code webscrapes data from the cryptoprediction.com website and this data is displayed in the localhost. By using JQuery the data in the localhost is presented in tabular form

```
const axios = require('axios')

const cheerio = require('cheerio')

const express = require('express')


async function getSolanaPrice(){

   try{

      const siteUrl = 'https://cryptopredictions.com/cardano/'

      const {data} = await axios ({

         method: "GET",

         url: siteUrl,

      })

      const $ = cheerio.load(data)

      const car22 = '#page > div.container.detail-page > div.crypto-info > div.tables > div:nth-child(2) > div > table > tbody > tr'

      const car23 = '#page > div.container.detail-page > div.crypto-info > div.tables > div:nth-child(4) > div > table > tbody > tr'

      const car24 = '#page > div.container.detail-page > div.crypto-info > div.tables > div:nth-child(6) > div > table > tbody > tr'

      const car25 = '#page > div.container.detail-page > div.crypto-info > div.tables > div:nth-child(8) > div > table > tbody > tr'
```

```
    const car26 = '#page > div.container.detail-page > div.crypto-info > div.tables > div:nth-child(10) > div > table > tbody > tr'

    const carkey = [
        'month',
        'minimumprice',
        'maximumprice',
        'averageprice',
        'change'
    ]
    const carArr = []
    //2022
    $(car22).each((parentIdx, parentElem)=>{
        let keyIdx = 0
        const coinObj= {}
        $(parentElem).children().each((childIdx,childElem)=>{

            const tdValue = $(childElem).text()
            if(tdValue){
                coinObj[carkey[keyIdx]] = tdValue
                keyIdx++
            }
        })
        carArr.push(coinObj)
    })
    //2023
    $(car23).each((parentIdx, parentElem)=>{
        let keyIdx = 0
```

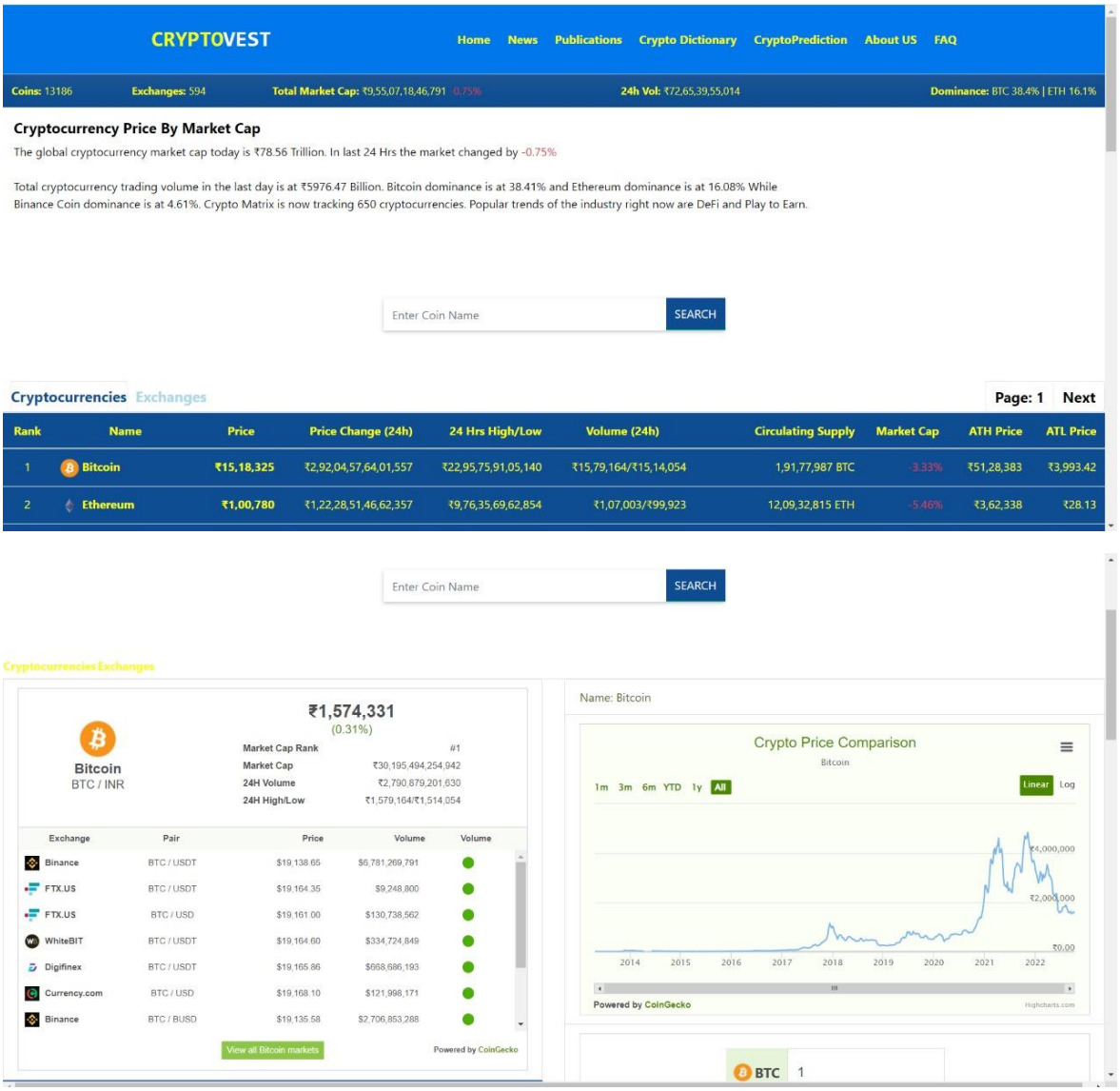
```
    const coinObj= {}
    $(parentElem).children().each((childIdx,childElem)=>{

        const tdValue = $(childElem).text()
        if(tdValue){
            coinObj[carkey[keyIdx]] = tdValue
            keyIdx++
        }
    })
    carArr.push(coinObj)
})
//2024
$(car24).each((parentIdx, parentElem)=>{
    let keyIdx = 0
    const coinObj= {}
    $(parentElem).children().each((childIdx,childElem)=>{

        const tdValue = $(childElem).text()
        if(tdValue){
            coinObj[carkey[keyIdx]] = tdValue
            keyIdx++
        }
    })
    carArr.push(coinObj)
})
//2025
```

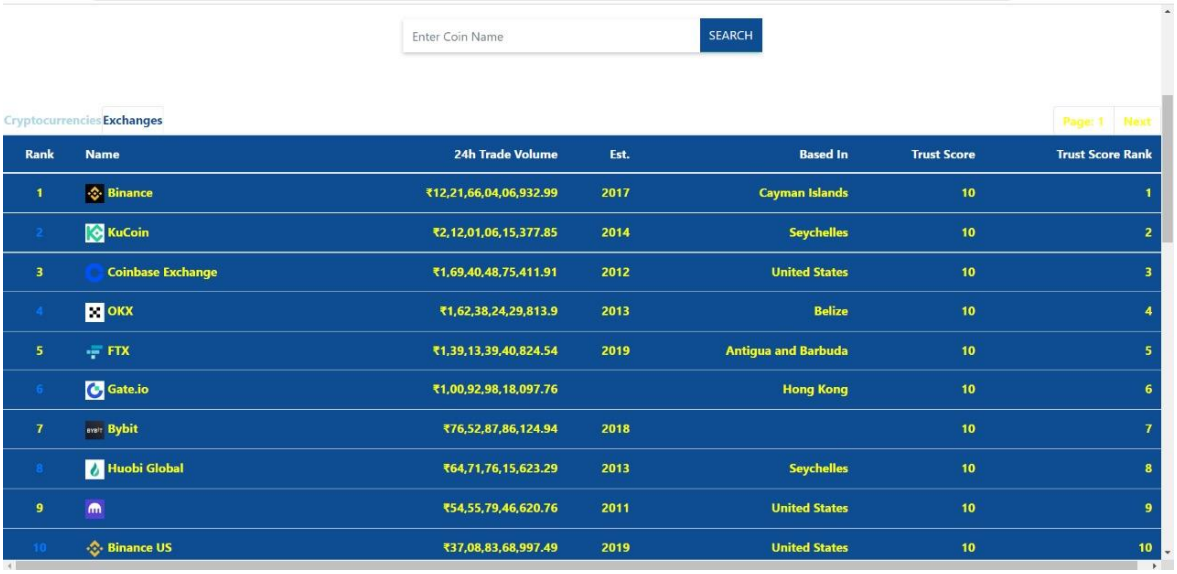
```
$(car25).each((parentIdx, parentElem)=>{
    let keyIdx = 0
    const coinObj= {}
    $(parentElem).children().each((childIdx,childElem)=>{

        const tdValue = $(childElem).text()
        if(tdValue){
            coinObj[carkey[keyIdx]] = tdValue
            keyIdx++
        }
    })
    carArr.push(coinObj)
})
//2026
$(car26).each((parentIdx, parentElem)=>{
    let keyIdx = 0
    const coinObj= {}
    $(parentElem).children().each((childIdx,childElem)=>{

        const tdValue = $(childElem).text()
        if(tdValue){
            coinObj[carkey[keyIdx]] = tdValue
            keyIdx++
        }
    })
    carArr.push(coinObj)
```

```
        })
        return carArr
    }
    catch(err){
        console.log(err)
    }
}
const app = express()
app.get('/api/PredictCar', async (req,res)=>{
    try{
        const coinpredict  = await getSolanaPrice()
        return res.status(200).json({
            result: coinpredict,
        })

    } catch(err){
        return res.status(500).json({
            err: err.toString(),
        })
    }
})
app.listen(4600, ()=>{
    console.log("running on port 4600")
})
```

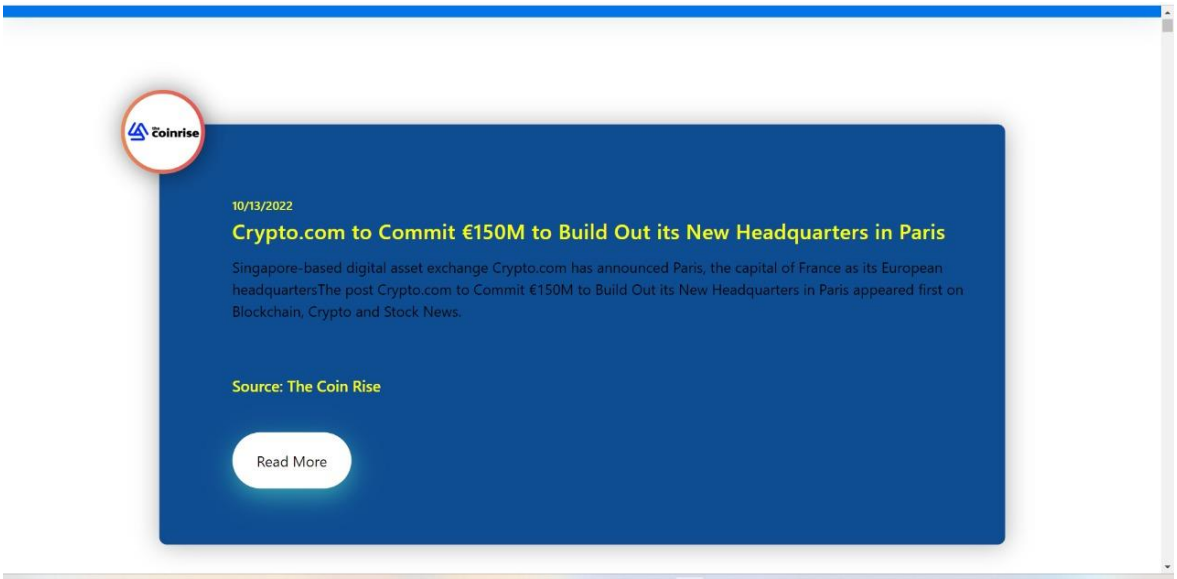
Chapter 9

Result and Discussion :



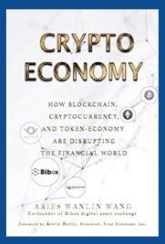


Rank	Name	24h Trade Volume	Est.	Based In	Trust Score	Trust Score Rank
1	Binance	₹12,21,66,04,06,932.99	2017	Cayman Islands	10	1
2	KuCoin	₹2,12,01,06,15,377.85	2014	Seychelles	10	2
3	Coinbase Exchange	₹1,69,40,48,75,411.91	2012	United States	10	3
4	OKX	₹1,62,38,24,29,813.9	2013	Belize	10	4
5	FTX	₹1,39,13,39,40,824.54	2019	Antigua and Barbuda	10	5
6	Gate.io	₹1,00,92,98,18,097.76		Hong Kong	10	6
7	Bybit	₹76,52,87,86,124.94	2018		10	7
8	Huobi Global	₹64,71,76,15,623.29	2013	Seychelles	10	8
9		₹54,55,79,46,620.76	2011	United States	10	9
10	Binance US	₹37,08,83,68,997.49	2019	United States	10	10



CRYPTOVEST

Home News Publications Crypto Dictionary Contact



Crypto Economy: How Blockchain, Cryptocurrency, and Token-Economy Are Disrupting the Financial World

Publisher : Skyhorse Publishing
Year : 2018

★★★★½

In late 2008, under the long shadow cast by the most severe economic crisis in generations, a revolutionary new form of currency was quietly being shaped. At the time no one could have predicted that an obscure form of electronic money would in less than a decade prove to be the most important financial innovation of the 21st century—a tool that would spark an entire new economic institution: crypto economy.

That once-obscure money was known as Bitcoin, and today it is the highest valued digital coin. And though consumers continue to scramble to cash in on the trending currency, the technology behind Bitcoin known as Blockchain, which allows the currency to bought and sold without regulation by a

CRYPTOVEST

Home News Publications Contact

Ethereum Ecosystem

Market Cap : $ 389.616 Billion **24H Market Change -2.77%**

Smart Contract Platform

Smart contract platforms are usually blockchains that host smart contracts or decentralized applications. Users can interact with different smart contracts on these platforms to perform various actions such as lending and borrowing funds, staking their assets or minting NFTs. Smart contracts are programs that are stored on the blockchain and are automatically executed when certain conditions are met. To interact with these smart contracts, transaction fees may need to be paid and the amount and asset required will vary based on the platform's architecture. Usually, the smart contract platform's native token is used to pay for transaction fees. Some popular examples of smart contract platforms include Ethereum, Solana and Polygon.

Chapter 10

Conclusion and Future Scope :

Cryptocurrency offers a new, effective and attractive model of payment methods that can boost companies and operators revenues. It also provide alternative method of payment, apart from real money, that enable users to make financial activities such as buying, selling, transferring and exchanging easily. Although cryptocurrency platforms open many channels for digital financial transactions and provide a new form of currency with different mechanisms and methods, they are not controlled and regulated as they deserved. The research analyzed cryptocurrency platforms and extracted many concerns and challenges that put such financial system under the risk.

The lack of legislations is considered as the main concern in cryptocurrency systems. Almost a clear picture of the size of cryptocurrency use has been drawn from my analysis of the current cryptocurrency literature and from the conducted study. Although the pilot study has been conducted with relatively small sample, but the results showed me a preliminary perception about the use, the growth, the trust of using and future expectations of cryptocurrency. I can now realize many indications that can provide initial answers to the research questions.

My analysis indicates that cryptocurrency is very likely to be the next currency platform due to the large volume of cryptocurrency that is flowing in different systems, the huge expanding and growing of using and implementing cryptocurrencies and the opportunities that cryptocurrency systems offer. Moreover, the confidence and trust rate of using cryptocurrency is noticeably high as it can be seen in several cases that have been stated in this paper besides the survey results.

However, users have not realized the full picture of using cryptocurrency. In fact, many cryptocurrency forms do not deserve that much of trust yet. Many concerns, challenges and issues are existing in many cryptocurrency platforms and they are clearly outlined in the above sections of this paper. Until cryptocurrency is being well regulated and controlled, users need to take extra precautions of using such virtual money.

References :

A brief survey of Cryptocurrency systems
[https://ieeexplore.ieee.org/document/7906988]

Ujan Mukhopadhyay; Anthony Skjellum; Oluwakemi Hambolu; Jon Oakley; Lu Yu; Richard Brooks

A Study of Current Cryptocurrency Systems
[https://ieeexplore.ieee.org/document/8525166]

R. Raju; M. SaiVignesh; K. Infant Arun Prasad

www.react.com

www.nodejs.com

www.coingecko.com

www.researchgate.com

https://www.youtube.com/watch?v=9DDX3US3kss&t=3s