

Web Application for **Monitoring** Real-time Cryptocurrency **Statistics and News** 



Our project aims to create a web application to monitor real-time cryptocurrency stats and news. It also shows the line graph of different time-stamp to analyse whether we have to invest in a cryptocurrency or not.

# **PROJECT WORK**



#### **GLOBAL CRYPTOCURRENCY STATS**

- There are in total 12, 357 cryptocurrencies all over the world.
- It covers the total markets of 81.1k and market capitalisation of 2.7 Trillions which is calculated by multiplying the total number of cryptocurrency in circulation by the cryptocurrency price.
- Currently there are 373 number of total exchanges which covers the total 24h Volume of 120.8
   Billions.
- Exchanges refers to business that allows customers to trade cryptocurrencies for other assets and
   Volume simply means that the total amount of coin traded in the last hours.

# **Technology behind Cryptocurrency?**



## Blockchain gives a back support to cryptocurrencies

- Blockchain is just a collection of blocks that are linked together using cryptographic algorithm named as SHA-256(Secure Hash Algorithm).
- Each Block contains a hash value of the previous block, a timestamp and transaction data.
   Blockchain are resistant to modification of their data because once recorded, the data in any given block cannot be altered retroactively without altering all subsequent blocks.
- It is decentralized and typically managed by a peer-to-peer network for use as a publicly distributed ledger.

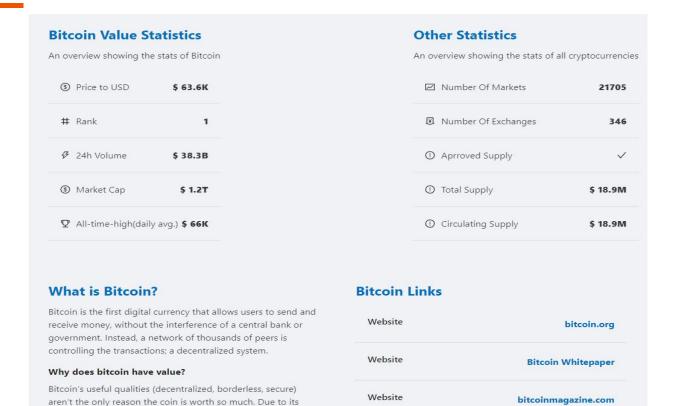
# How we list out cryptocurrencies?



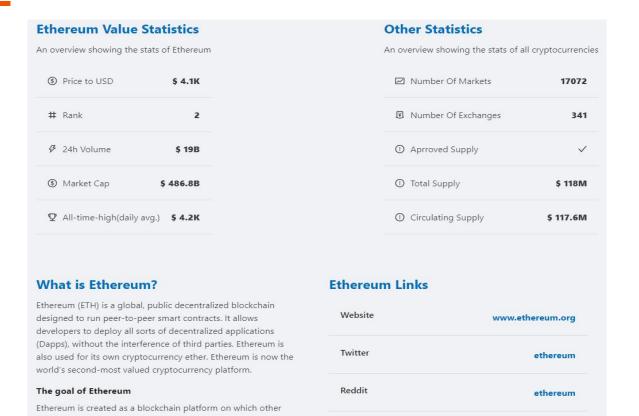
# Listing of cryptocurrencies -

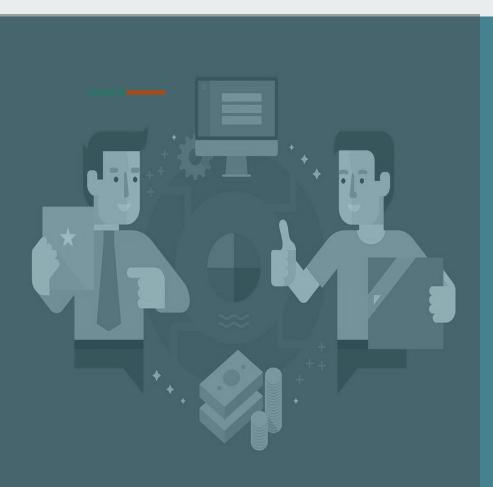
- We listed out cryptocurrencies in terms of their ranking in the world.
- We showed live data of Total 100 cryptocurrencies.
- Each cryptocurrency have their own value statistics comparing with generic statistics of all
  cryptocurrencies, brief introduction about the selected cryptocurrency, links for checking out and
  a line graph to visualize.

### Bitcoin - btc live stats



### Ethereum - eth live stats





# Exchanges

## What are exchanges?

- Cryptocurrency exchanges are platforms that facilitate the trading of cryptocurrencies for other assets, including digital and fiat currencies.
- In effect, cryptocurrency exchanges act as an intermediary between a buyer and a seller and make money through commissions and transaction fees.
- On common cryptocurrency exchanges, \$100 can be exchanged for bitcoin of equivalent value, and vice-versa. Similarly, bitcoin worth \$100 can be exchanged for Etherium of equivalent value. The same concept can be applied to different assets based on what is offered by the exchange.

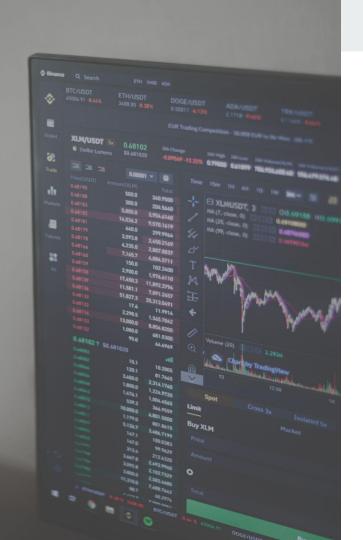




# **News API**

### **News API**

- We linked a live news API to get updated through latest cryptocurrency related news of your preferred cryptocurrency.
- Implemented a search option for choosing cryptocurrency you like the most.
- Microsoft bing news search API is used.



How we compare live prices?

# **Comparing prices**

- In this project, we compare prices using line graph.
- Graph dataset is retrieved from API which is linked with line chart component.
- Each point in a graph shows rises and downs in prices with the date.
- You can monitor prices of previous hours, months and years to the current prices and decide to invest or not.

## Bitcoin line graph



# Ethereum line graph



### **Challenges Faced**

- Selecting a framework for the UI part, there are many leading options like react, angular, vue and more.
- We go with the **React.js**. React is a JavaScript library though not a framework.
- Next for the API integration, first we think about axios for API integration but later on we go with redux-toolkit for better state management.

# **Software and Module Requirements**

- Node.js 14.18.1
- React 17.0.2
- react-router-dom 5.3.0
- Chart.js 3.5.1

- Redux-toolkit 1.6.1
- Ant Design 4.16.13
- Rapid API

## Limitations of our project

- The cryptocurrency market varies by seconds. Sometimes it is difficult to recognize the change in the line graph.
- The UI looks better on big screen devices, you have to use landscape mode if you are seeing in the small devices.

### Conclusion

- Cryptocurrency is now getting popular day-by-day, because of the Blockchain technology it is safe and trustable for transaction. Where Ethereum is also capable to centralised not only coins but the internet also.
- In this report, we successfully created a web-based application to monitor cryptocurrency varying rates, Although it gives 91% accuracy results to get proper understanding of the increasing and decreasing prices of cryptocurrency.

## **Future Scope**

- We are planning to achieve higher accuracy by the implementation through **Machine Learning** algorithms.
- Also, we can train machine learning models to predict future prices of cryptocurrencies in this project.



# **Efforts by**

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# Thank You!