



# BITCOIN PRICE ANALYZE AND PREDICTION USING DATA SCIENCE PROCESS

Ms. SURYA U, Mr. SANTHOSH KUMAR V, Mr. KOTHA VENKATA VASU, Mr. DINESH P  
ASSISTANT PROFESSOR, STUDENT, STUDENT, STUDENT,  
INFORMATION TECHNOLOGY  
DR MGR EDUCATIONAL AND RESEARCH INSTITUTE, CHENNAI, INDIA

*Abstract:* Bitcoin is an advanced resource and an installment framework that is utilized as a type of internet cash. It takes into consideration unknown installment starting with one individual then onto the next and is along these lines a favored installment strategy for criminal activities on the Internet. As of late Bitcoin has gotten a ton of consideration from the media and the general population because of its new value climb. The target of this paper is to decide the anticipated value heading of bitcoin cost. AI models can almost certainly give us the knowledge we really want to find out with regards to the eventual fate of cryptocurrency. It won't let us know the future yet it may let us know the overall pattern and course to anticipate that the costs should move. The proposed model is to construct an AI model where the information is utilized to made to find out with regards to the example in the dataset and the AI calculation is utilized to made to find out with regards to the example in the dataset and the AI calculation is utilized to foresee the bitcoin cost.

*Index terms* - Machine Learning, Bitcoin, Data Science

## 1. INTRODUCTION

### Machine Learning

AI is the ability to predict the future based on previous data. Computerized reasoning (AI) is a kind of computerized reasoning (AI) that allows PCs to learn without being explicitly updated. The core of Artificial Intelligence (AI) is the development of computer programmes that can adapt to new knowledge, as well as the nuts and bolts of machine learning. Preparation and forecasting need the use of certain calculation. As a result of using the preparation data, a computation may predict things about the result of another test.

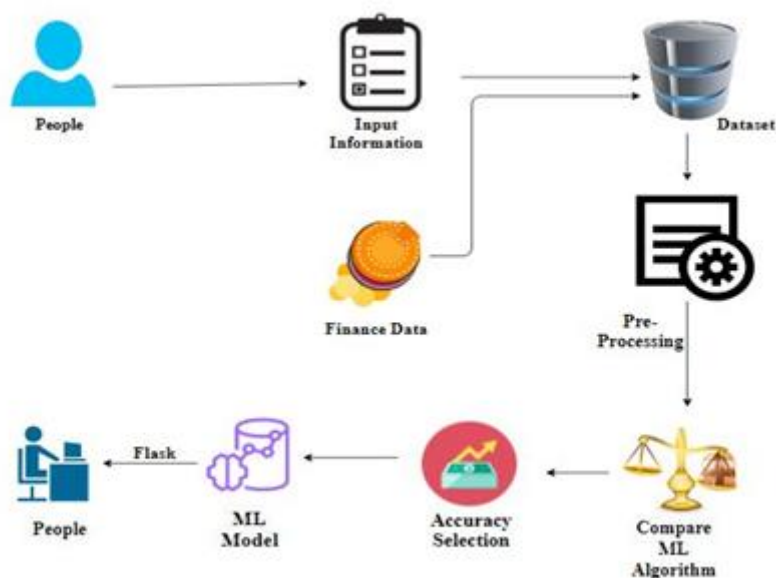
## 2. SCOPE OF THE PROJECT

Bitcoin is an internet-based medium of exchange in the form of digital assets which uses cryptographic functions to conduct financial transactions. Bitcoin leverage block chain technology to gain decentralization, transparency, and immutability. The main scope of the project is to finding accuracy, Minimize the error rate and getting result from the flask framework deployment.

## 3. PROPOSED METHODOLOGY

Bitcoin's recent price increase has drawn a lot of attention from the media and the general public. It is the goal of this research to discover the Bitcoin price's predicted direction. The full dataset will be analysed using the supervised machine learning approach (SMLT) to identify variables, perform univariate, bivariate, and multivariate analysis, and examine missing value treatments, data validation, data cleaning, and data visualisation. Based on our findings, model parameter sensitivity may be effectively assessed in terms of prediction accuracy. This paper proposes a machine learning-based approach and compares various machine learning methods against the provided dataset. The model can be used to predict the bitcoin future. Performance metrics like accuracy, recall and precision can be calculated. Bitcoin future may be predicted and the investments can be made wisely.

#### 4. SYSTEM ARCHITECTURE



#### 5. MODULE DESCRIPTION:

##### DATA PRE-PROCESSING

Approval techniques in AI are used to get the ML model's failure rate, which may be regarded as being close to the dataset's true error rate. If the amount of information is large enough to be representative of the general population, the approval techniques may not be required. Even in real-world settings, it is necessary to deal with data that may or may not be a true indicator of the population in a specific dataset. Finding and resolving information type's value, whether it's a float variable or whole number. When setting model hyperparameters, the information example was used to provide a fair evaluation of model fit on the preparation dataset.

##### Exploration data analysis of visualization

Applied measures and artificial intelligence (AI) need competence in information perception. Quantitative representations and judgments of data are, in fact, the focus of insights. In order to get a subjective agreement, information representation provides an extensive collection of tools. This may be beneficial while exploring and getting to know a dataset and can help recognise designs, degenerate information, abnormalities and substantially more. This is useful. Information representations may be used to convey and show essential relationships in plots and outlines that are more intuitive and partners than proportions of affiliation or relevance with a little amount of information. Information representations. As a result, reading some of the works mentioned at the conclusion of this chapter might lead to a deeper understanding of some of the topics of discussion previously.

##### Algorithm explanation

Characterization is a method used in artificial intelligence and insights in which a computer algorithm learns from the data that is sent to it and then uses that knowledge to create new perspectives. For example, if an individual's gender is determined, or if the mail is classified as either spam or non-spam, this information gathering might be either bi-class (such as determining if the mail is sent to a person of said gender) or multi-class. Discourse recognition, penmanship acknowledgment, biometric distinguishing evidence, archive grouping, and so on are examples of characterisation challenges. Marked data is used in calculations in Supervised Learning. After understanding the information, the calculation figures out which name ought to be given to new information dependent on example and partners the examples to the unlabeled new information.

#### CONCLUSION

From data cleaning and processing through missing value analysis to model construction & assessment, the analytical process began. The test set with the highest accuracy score will provide the most reliable data. The BITCOIN Market Price may be found with the help of this software.

**Future work**

- Bitcoin Market Price prediction to connect with AI model.
- This method may be made efficient by presenting the expected outcome in a web or desktop application.
- To optimise the job to implement in Artificial Intelligence environment.

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