BITCOIN PRICE PREDICTION USING DATA MINING

Bitcoin is an open-source virtual or digital currency designed to work as a medium of exchange that is secured by cryptography. It maintains a public ledger to manage transactions. The cryptography concept is used to achieve authentication. Its most prominent feature is that it is entirely decentralized, i.e. not regulated or controlled by any central authority.

The Bitcoin market is massively growing, being valued at 293.66 million US dollars in 2019. Due to its almost zero risk of inflation, the market is trending, and people are investing in it. That's why there is a requirement of analysis of bitcoin price trends and value prediction so that investors can be benefited in making the right decisions about investing in bitcoins.

In this project, we aim to predict the Bitcoin price accurately by considering various parameters that affect the value of Bitcoin using data mining methods.

We went through several papers that have worked in this regard and found that researchers have used different techniques to predict the value of bitcoins. We plan to use multiple methods for the prediction and then do a comparative analysis of the results obtained by various techniques to find the best one suitable for the task. Some of the approaches used by researchers for the prediction are as follows:

1. Linear Regression Model
2. K-Nearest Neighbour
3. Naive Bayes
4. Support Vector Machine
5. Recurrent Neural Networks (RNN)
6. Convolutional Neural Networks
7. Deep Neural Networks
8. Auto Regressive Integrated Moving Average(ARIMA)
9. Random Forest
10. Gradient boosting classifier
11. Long-Short Term Memory (LSTM)
12. Gradient boosting regressor