

Cryptocurrency Price Analysis Using Artificial Intelligence

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Abstract- Cryptocurrency is taking an large important role in reshaping the financial system due to its growing popular appeal and merchant acceptance. While many of us are creating investments in cryptocurrency, the projectile option, uncertainty, the foregone conclusion of cryptocurrency or still principally unknown, that dramatically risk the investments.. It is a interest attempt to perceive the factors that influence the worth formation. Advanced AI frameworks of absolutely connected Artificial Neural Network (ANN) and long STM(LSTM) continual Neural Network to analysis the value dynamics of Bitcoin, Ethereum, and Ripple employed. Cryptocurrency find that ANN tends to rely more on long-term history while LSTM tends to rely more on short-term dynamics, which indicate the efficiency of LSTM to utilise useful information hidden in historical memory is stronger than ANN

Keywords-- ANN, LSTN, Crypto Currency Price Prediction

I. INTRODUCTION

This project seeks to provide a comprehensive analysis of the crypto currency industry with particular analysis of Bitcoin, the first decentralized crypto currency. Particular attention will be given to examining theoretical economic differences between existing coins. Crypto currencies are attracting the attention of the media due to their jaw-dropping performance and rapid growth in recent years. Many individuals are fascinated by such financial instruments providing

possibility of generating quick wealth through rapid price appreciation albeit the excessive volatility and high risk. fake. System also shows the accuracy of the signatures. The aim of the project is to find the predictable output. Now a days in world diseases proportion is exaggerated thanks to the modification within the weather, modification in human habits' and plenty of additional reasons. In the world every human has some small or big health related problem. So, there is needed to take care from those problems.

II. AIMS AND OBJECTIVE

a) Aim

The aim of this project is to Predict Crypto currency prices with deep learning.

This project aims to investigate how Artificial Intelligence techniques perform in the prediction of crypto

currency prices. The study suggests that ANN can explore short run informational inefficiencies to generate abnormal profits, being able to beat even buy-and-hold during strong bull trends given enough historical information ANN can achieve a similar accuracy, compared with LSTM.

b) Objective

A crypto currency price analysis is to secure and verify transactions as well as to control the creation of new units of a particular crypto currency. The purpose of exchanging digital information, To provide best prediction, Prevent Identity Theft Fraud Detection, Easy to use.

III. LITERATURE SURVEY

Paper1: Greaves, Alex, and Benjamin Au. "Using the bitcoin transaction graph to predict the price of bitcoin." *No Data* (2015).

Bitcoin is the world's leading crypto currency, allowing users to make transactions securely and anonymously over the Internet. In recent years, The Bitcoin the ecosystem has gained the attention of consumers, businesses, investors and speculators alike. While there has been significant research done to analyze the network topology of the Bitcoin network, limited research has been performed to analyze the network's influence on overall Bitcoin price.

Paper2: White, Halbert. "Economic prediction using neural networks: The case of IBM daily stock returns." (1988): 451-458.

A report is presented of some results of an ongoing project using neural-network modeling and learning technique to search for and decode nonlinear regularities in asset price movements. The author focuses on the case of IBM common stock daily returns. Having to deal with the salient features of economic data highlights the role to be played by statistical inference and requires modifications to standard learning techniques which may prove useful in other contexts.

Paper 3: Adebisi, Ayodele A., et al. "Stock price prediction using neural network with hybridized market indicators." *Journal of Emerging Trends in Computing and Information Sciences* 3.1 (2012): 1-9.

Stock prediction with data mining techniques is one of the most important issues in finance being investigated by researchers across the globe. Data mining techniques can be used extensively in the financial markets to help investors make qualitative decision. One of the techniques is artificial neural network (ANN). However, in the application of ANN for predicting the financial market the use of technical analysis variables for stock prediction is predominant. In this project, it present a hybridized approach which combines the use of the variables of

technical and fundamental analysis of stock market indicators for prediction of future price of stock in order to improve on the existing approaches.

IV. EXISTING SYSTEM

Stock price prediction models, traditional time series methods are not very useful as crypto currencies are not precisely the same with stocks but can be deemed as a complementary good of existing currency system with sharp fluctuations features.

Therefore, it is urgently needed to understand the dynamics of crypto currencies better and establish a suitable predictive

modelling framework. In this study, the hypothesis that time series of crypto currencies exhibits a clear internal memory, which could be used to help the memory-based time series model to works more appropriately if the length of internal memory could be quantified. This project aim to use two artificial intelligence modelling frameworks to understand and predict the most popular cryptocurrencies price dynamics, including Bitcoin, Ethereum, and Ripple.

V. COMPARTIVE STUDY

SR NO.	PAPER TITLE	AUTHOR NAME	METHOD	ADVANTAGE	DISADVANTAGE
1.	"Using the bitcoin transaction graph to predict the price of bitcoin."	Greaves, Alex, and Benjamin Au.	Bitcoin is the world's leading cryptocurrency, allowing users to make transactions securely and anonymously over the Internet.	Secure Transactions. Analyze the research.	Accuracy around 55%
2.	"Economic prediction using neural networks: The case of IBM daily stock returns."	White, Halbert.	A report is presented of some results of an ongoing project using neural-network modeling and learning technique to search for and decode nonlinear regularities in asset price movements.	Secure Transactions. Analyze the research.	Requires Modifications
3.	"Stock price prediction using neural network with hybridized market indicators."	Adebisi, Ayodele A., et al	Hungarian method	Stock daily return. Learning technique.	Time Consuming

VI. PROBLEM STATEMENT

Problem being solved: crypto currency price analysis summarization. A site contains previous analysis of various currencies: bitcoins, libra, stock prices, shares etc. Each crypto currency type has different characteristics. The project objective is to extract previous history and predict by finding those characteristics that discriminate them from the other types of currency. The goal is to find the most accurate and precise predictability of the crypto currencies.

VII. PROPOSED SYSTEM

Complete prototype system has been developed for the task of prediction of cryptocurrency price analysis website summarization. Given a Website, system extracts its most characteristic images. These images form the image summary of the Web site. System will also show the accuracy of the signature and for verification it will show the result whether the signature is genuine or forged. The semantic similarity based on single document

summarization the algorithm takes two input parameters, the input text document and the no. of frequency terms. As the output generated a summarized result of crypto price. Random forest classifier and neural network is used in proposed system.

VIII. ALGORITHM

The general idea of working of proposed system algorithm is given as follow:

The general idea of working of proposed system algorithm is given as follow:

- Step.1:** Load The Data for predate analysis
- Step.2:** Initialize The Analysis
- Step.3:** Study the support and resistance values
- Step.4:** Initialize New Data/Price Action
- Step.5:** : Apply For Loop For K-Means Clustering Algorithm To Generate 3 Different. Records of previous price analysis.
- Step 6** Low Risk, High Risk And Medium Risk As Per Their.
- Step.7 :** Until the obtained cryptocurrency price analysis reports are repeated.

IX. MATHEMATICAL MODEL

Input Gate

$$f_t = \sigma(W_f \cdot [h_{t-1}, x_t] + b_f)$$

An input gate produces itthrough a Sigmoid activation, andthe tanh function that generates potential internal state (Ct).Both of them control how much new information will be addedto Ct-1 to update the real internal state to Ct:

$$i_t = \sigma(W_i \cdot [h_{t-1}, x_t] + b_i)$$

$$\tilde{C}_t = \tanh(W_C \cdot [h_{t-1}, x_t] + b_C)$$

$$C_t = f_t * C_{t-1} + i_t * \tilde{C}_t$$

A. Centroid for Curved Areas:

The skewness work processes an example variant of this populace esteem.

Whe banner set to 1, the skewness is one-sided, and the accompanying condition applies:

$$s_1 = \frac{\frac{1}{n} \sum_{i=1}^n (x_i - \bar{x})^3}{\left(\sqrt{\frac{1}{n} \sum_{i=1}^n (x_i - \bar{x})^2} \right)^3}$$

When banner set to 0, skewness adjusts for the methodical inclination, and the accompanying condition applies:

$$s_0 = \frac{\sqrt{n(n-1)}}{n-2} s_1$$

This predisposition redressed condition necessitates that X contain no less than three components.

X. SYSTEM ARCHITECTURE

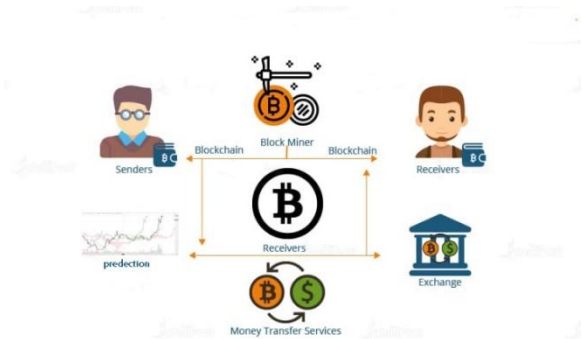


Fig.1: System Architecture

The main purpose of this software is to analyze crypto currency prices and provide services to user and encrypt the data of user. Hence, for this purpose active internet is required. The GUI is so simple that we can understand easily. The scope of this research is to provide user services without any complicated procedures. The Project consists of two main parts provider and User. In order to avoid any kind of wrong analysis to users, we use LSTN Algorithm in order to check analysis of the crypto currency data provided by the user.

Description: There are 2 types of phases: 1. Training phase 2. Testing phase

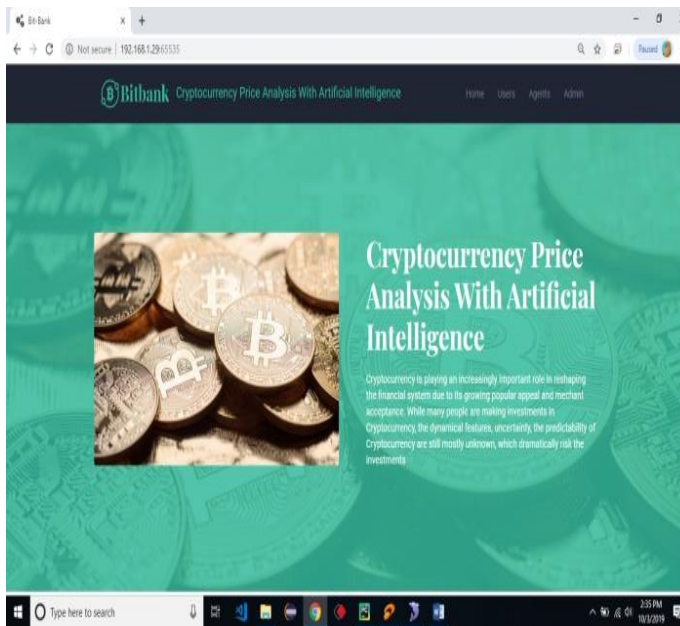
1) Training phase: system take the signature five valid and five invalid signature from the user from that three signature are used for traing phase and two used for testing phase after that some preprocessing operation perform on that signature then feature extraction operation performed on that signature for that it use ratio, centroid x, centroid y and solidity extraction function-

2) Testing phase: In testing phase it verify the signature of the new user. system will take five valid or invalid signature of the new user and it will show the result whether the signature is genuine or forged.

XI. ADVANATGES

- 1) Complete analysis will be down using Artificial Intelligence
- 2) It is simple to use
- 3) Easily acquired
- 4) Widely Accepted
- 5) Non-intrusive
- 6) Widespread use
- 7) Resistance to forgery

XII. DESIGN DETAILS



XIII. CONCLUSION

Thus, We have tried to implement the paper “Moises Diaz, Andreas Fischer, Miguel A. Ferrer, and Réjean Plamondon, Fellow”, “*Dynamic Signature Verification System Based on One Real Signature*”, IEEE 2016 and according to the implementation the conclusion is for the verification of the signature. system has performed verification of the signature whether the users signature is genuine or forged.system also calculated the accuracy of the signatures. The method of signature verification, preprocessing, and future extraction benefits the advantage of being exceptionally satisfactory by potential clients when appeared differently in relation to the rest of biometric courses of action. Hence the above project implemented is basically for the verification of the users signatures.

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