

Cryptocurrency Research And Analytical Tool

* A complete prediction, comparison and conversion model for cryptocurrency.

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Abstract—Growing demand in internet usage has brought up to the revolution in digital economy. From the past decade digital economy is playing major role round the world. The physical assets are converted to digital assets, in which crypto currency is playing prime role. Now day world's billionaires and millionaires want to invest into cryptocurrency instead of stocks like Elon musk and Ratan TATA. A cryptocurrency, crypto-currency, or crypto is a binary data designed to work as a medium of exchange wherein individual coin ownership records are stored in a ledger existing in a form of a computerized database using strong cryptography to secure transaction records, to control the creation of additional coins, and to verify the transfer of coin ownership. Crypto currency price prediction and forecast has been one of the tedious tasks for long period. Existing works are attempted to go for accurate prediction and forecast through machine learning models. The forecast can be useful work for the investors to know about the nature of price in future and gives them directions for their investments. In this proposed work, Bitcoin price prediction is proposed through the deep learning models such as Artificial Neural Network and Long short-term memory (LSTM) models. With Prediction user get the benefits of crypto comparison application and crypto conversion, with the use of the data analysis we try to analyses past value of two cryptocurrency and give their comparison. With that program contain the application of crypto-to-crypto conversion. The aim of the work is to give accurate predictions and forecast with comparison and conversion to bring the daily trend for crypto currency in market. Experimental studies show that the proposed technologies give better accuracy on predictions.

Index Terms—Crypto-currency, Machine learning, Deep learning, Artificial Neural Networks (ANN), Long short term memory (LSTM), Analysis, Comparison, Conversion.

I. INTRODUCTION

In this paper we will try to describe the topic related to cryptocurrency prediction , Growth Comparison and Conversion based on its current value. A complete machine learning real world , current era problem solve through using LSTM neural networks.

II. CRYPTOCURRENCY PREDICTION MODEL

Prediction modeling is a commonly used statistical technique to predict future behavior. Predictive modeling solutions are a form of data-mining technology that works by analyzing historical and current data and generating a model to help

predict future outcomes. In the similar way if we use the statistical data of cryptocurrencies and give as input to the model it may be possible that we get the output that is prediction of the cryptocurrency nearly accurate depends on our model.

A. Use of machine learning in prediction models

Although machine learning has been successful in predicting stock market prices through a host of different time series models, its application in predicting cryptocurrency prices has been quite restrictive. The reason behind this is obvious as prices of cryptocurrencies depend on lot of factors like technological progress, internal competition, pressure on the markets to deliver, economic problems, security issues, political factors etc. To use the technology of machine learning we require some of the requirements like "Data" , "Training and Testing sets", Techniques like there are three common techniques used in prediction models: Decision trees, neural networks, and regression.

For such type of model we need to go through some of the steps like:

step 1: Getting cryptocurrency data.

step 2: Prepare data for training and testing.

step 3: Predict the price of cryptocurrency using LSTM neural network.

step 4: Visualize the prediction results.

B. Prediction model using LSTM neural networks technology:

i. A look into Recurrent Neural Networks (RNN)

Recurrent neural networks (RNNs) are a class of neural networks that are naturally suited to processing time-series data and other sequential data. Recurrent neural networks (RNN) which is widely used to perform the sequence analysis process. As shown in "Fig. 1"

ii. What exactly is LSTM

LSTM stands for "Long Short Term Memory". It is an artificial recurrent neural network (RNN) architecture used in the field of deep learning (DL). : It works by using special gates to allow each LSTM layer to take information from both previous layers and the current layer. The data goes through multiple gates (like forget gate, input gate, etc.) and

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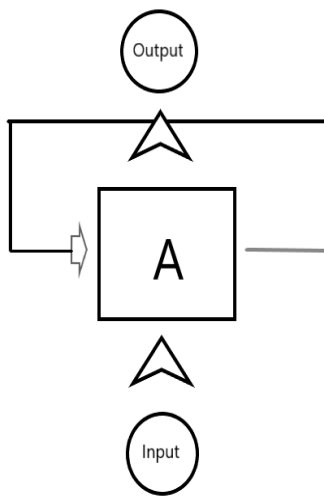


Fig. 1. Proposed Block diagram of RNN

various activation functions (like the tanh function) and is passed through the LSTM cells.

iii. Working of LSTM

iv. Activation Functions

1.

v. Working of Gates

1. Forgate:

1. :

C. Prediction model Challenges and Advantages

III. PREPARE YOUR PAPER BEFORE STYLING

A. Abbreviations and Acronyms

B. Units

- 1
- 2
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- 4

C. Equations

$$a + b = \gamma$$

D. \LaTeX -Specific Advice

E. Some Common Mistakes

- 1
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An excellent style manual for science writers is [7].

F. Authors and Affiliations

The class file is designed for, but not limited to, six authors.

G. Identify the Headings

H. Figures and Tables

a) *Positioning Figures and Tables:* Place figures and tables at the top and bottom of columns. Avoid placing them in the middle of columns. Large figures and tables may span across both columns. Figure captions should be below the figures; table heads should appear above the tables. Insert figures and tables after they are cited in the text. Use the abbreviation “Fig. 2”, even at the beginning of a sentence.

TABLE I
TABLE TYPE STYLES

Table Head	Table Column Head		
	Table column subhead	Subhead	Subhead
copy	More table copy ^a		

^aSample of a Table footnote.



Fig. 2. Example of a figure caption.

ACKNOWLEDGMENT

REFERENCES

Please number citations consecutively within brackets [1]. The sentence punctuation follows the bracket [2]. Refer simply to the reference number, as in [3]—do not use “Ref. [3]” or “reference [3]” except at the beginning of a sentence: “Reference [3] was the first . . .”

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