Stock Market Analysis Using Artificial Neural Network

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Abstract *- Stock market prediction is the act of trying to determine the future value of a company stock or other financial instrument traded on an exchange. The successful prediction of a stock's future price could yield significant profit. The share market is dynamic in nature means to predict share price is very complex process by general prediction or computation method. For the successful stock market prediction here we use artificial neural network. The use of neural network s has found a variegated field of applications in the present world. This has led to the development of various models for financial markets and investment. This paper represents the idea how to predict share market price using Artificial Neural Network with a given input parameters of share market. Artificial Neural Network can remember data of any number of years and it can predict the feature based on the past data. This paper makes use feed forward architecture for prediction. The network was trained using one year data. It shows a good performance for market prediction.*

Keywords - Artificial Neural Network, Stock Market, Finance.

I. INTRODUCTION

It is nowadays a common notion that vast amounts of capital are traded through the Stock Markets all around the world. National economies are strongly linked and heavily influenced by the performance of their Stock Markets. The characteristic that all Stock Markets have in common is the uncertainty, which is related with their short and long term future state. This feature is undesirable for the investor but it is also unavoidable whenever the Stock Market is selected as the investment tool. The best that one can do is to try to reduce this uncertainty. Stock Market Prediction (or Forecasting) is one instrument in this process.

The Stock Market prediction task divides researchers and academics into two groups those who believe that we can devise mechanisms to predict the market and those who believe that the market is efficient and whenever new information comes up the market absorbs it by correcting itself, thus there is no space for prediction. Furthermore they believe that the Stock Market follows a Random Walk, which infers that the best prediction you can have about tomorrow's value is today's value.

II. LITERATURE SURVEY

1. S. Sanka, C. Hota, and M. Rajarajan, "Secure data access in cloud computing," Internet Multimedia Services Architecture and application (IMSAA), 2010 IEEE 4th International Conference on, vol., no., pp.1-6, 15-17 Dec. 2010.

   This paper addresses this challenging open problem using capability based access control technique that ensures only valid users will access the outsourced data. This work also proposes a modified Diffie-Hellman key exchange protocol between cloud service provider and the user for secretly sharing a symmetric key for secure data access that alleviates the problem of key distribution and management at cloud service provider.

2. B. Ross Barmish"On a New Paradigm for Stock Trading Via a Model-Free Feedback Controller" with the Department of Electrical and Computer Engineering, University of Wisconsin, Madison, WI 53706 June 2015.

   In this paper we put forward the idea of using the cloud, The management of stock marketing using fundamental analysis, Technical Analysis, Artificial neural network.

3. Upadhyay, A., Bandyopadhyay, G., Dutta, A., "Forecasting Stock Performance in Indian Market using Multinomial Logistic Regression", Journal of Business Studies Quarterly, Vol. 3, No. 3, pp. 16-39, 2012.

   Logistic Regression, which is helpful for prediction of the presence or absence of a characteristic or outcome based on values of a set of predictor variables, is a multivariate analysis model.

4. Majumder, M., Hussian, A., "Forecasting of Indian Stock Market Index Using Artificial Neural Network". In most of the cases the researchers had attempted to establish a linear relationship between the input macroeconomic variables and the stock returns. ANN has evolved out to be better technique in capturing the structural relationship between a stock's performanceand its determinant factors more accurately than many other statistical techniques.

III. EXISTING SYSTEM

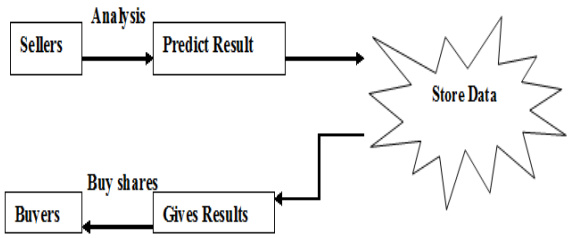

Fig : Existing System

A stock market or equity market is the aggregation of buyers and sellers of stocks (also called shares); these may include securities listed on a stock exchange as well as those only traded privately. Stock market forecasting software that can be utilized to predict share prices basing on how they were changing in the past. Unlike technical analysis, stock market forecasting is based on purely mathematical algorithms.

IV. CONCLUSION

In this System a review on various stock prediction techniques has been presented. On the basis of published and available literature, it can be safely concluded that the existing techniques are not suitable for prediction of stock market trends as well as price of different socks. There exist a gap between technologies and user requirement for a safe and accurate stock prediction system. If various political & economic factors which affect the stock market are also taken into consideration other than the technical indicators as input variables, better results may be obtained.

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