

# [In the past few decades, stock market](https://assignbuster.com/in-the-past-few-decades-stock-market/)

[Finance](https://assignbuster.com/essay-subjects/finance/)

Inthe past few decades, stock market prediction became one of the major fields ofresearch due to its wide domain of financial applications.

Stock market isknown for its dynamic nature, complication and non-linear nature. It is alsoknown as the equity market, the stock market is one of the most vital components of a free-market economy. Artificial neural network has seen massive interest in the over the last fewyears. ANN is used in many areas like finance, medicine, research anddevelopment and engineering. ANNs are mathematical models which were inspiredfrom the understanding of some ideas and aspects of the biological neuralsystems such as the human brain.

ANN may be considered as a data processingtechnique that maps, or relates, some type of input stream of information to anoutput stream of processing” Aneural network is a system composed of many simple processing elementsoperating in parallel whose function is determined by network structure, connection strengths, and the processing performed at computing elements ornodes” – DARPA Neural Network Study (1988). Inpast traditional methods were used to predict stock market. After much researchit was observed that significant profit can be achieved even with slightimprovement in the prediction since the volume of trading in stock markets isalways huge.

There are two methods used in this field 1)Statistics model: These are statisticalbased approaches such as linear regression, Auto-regression and Auto-regressionMoving Average2)Soft Computing: This technique includesANN, fuzzy logic, genetic algorithm. A multilayer neural network has been used asan universal function approximator(input, hidden layer and output) finds itsuse in a number of fields like sales forecasting, data validation, customerresearch, price forecasting, healthcare etcThoughfuzzy logic and genetic algorithm are also used for stock prediction however, ANNis one of the successful method which is widely used in solving predictionsolution. ANNs was used to solve variety of problems in financial time seriesforecasting. For example, prediction of stock price movement became easierusing ANN model. Neuralnetwork has become an important method for stock market prediction because oftheir ability large data sets which change rapidly in very short period.

InFeedforward (FF) Multilayer Perceptron (MLP), which is one of the