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PREDICTION OF STOCK VALUE PRICE

USING MACHINE LEARNING

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**Project Objective**

To develop a Machine Learning model which:

**1.** Predict whether stock value of a company would decrease or increase by observing the previous data.

**2.** Create four different types of model from the data–

Random Forest,

Linear Regression,

Moving Average and

KNN

Based on the training dataset.

1. Apply on the test data set and compare the differences in the results**.**



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**Project Scope**

Our project works on a dataset which consists various features attributes about a company and its stock value price in the share market.

Depending on that our model predicts whether the stock value price of the company will decrease or increase.

Our prediction model can be used in finance and share market sector to classify the variation in the stock value price.

For example, the objective could be to predict about the future value of the company by observing its stock price variation in the share market.



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**Requirement Specification**

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* 4GB RAM
* 32- or 64-bit Architecture computer.
* Anaconda Software
* Minimum 3 GB disk space to download and install.
* Windows, macOS or Linux.
* Python 3.5 or 3.6.

**Database Design**

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 A small loan application dataset taken from Kaggle (containing training and test data).

 Contents of dataset:

| **Date** | **Open** | **High** | **Low** | **Last** | **Close** | **Total Trade Quantity** | **Turnover (Lacs)** |
| --- | --- | --- | --- | --- | --- | --- | --- |

|  |  |  |
| --- | --- | --- |
| **Sl. No.** | **Features** | **Information** |
| 1 | Date | Date under observation |
| 2 | Open | Opening Stock Value |
| 3 | High | Highest Stock Value |
| 4 | Low | Lowest Stock Value |
| 5 | Last | Last Stock Value |
| 6 | Close | Closing Stock Value |
| 7 | Total Trade Quantity | Total Trade Amount of the company |

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**Future Scope of Improvements**

1. We can further use a graphical user interface to help easy handling and analysis of data.
2. The same model can be used to determine similar kind of predictions, for e.g. credit card repayment. And thus we can make this a whole system of its own.
3. The data set contained a lot of missing value. Moreover, we saw that most of the feature attributes did not contribute much to the prediction. If we had a proper dataset with better attributes, we could make the predictions more accurate.