**STOCK PRICE PREDICTION**

**INTERIM REPORT**

**Features:**

Original Dataset had the following features :

|  |
| --- |
| Opening Price |
| Highest Price |
| Lowest Price |
| Last Price |
| Closing Price |
| Trade Quantity |
| Turnover(Lacs) |

Based on the Study and Research in Stock Market We have come out with the following features :

|  |
| --- |
| Previous Day Closing Price |
| Same Day Opening Price |
| Previous Day Nifty Closing Price |
| 10 Days Moving averages |
| 15 Days Moving averages |
| 20 Days Moving averages |
| 40 Days Moving averages |
| 10 Days Momentum |
| 40 Days Momentum |
| Average Difference between Opening Price and Closing Price (5 Days ) |
| Average Difference between Opening Price and Closing Price (10 Days ) |
| Average Difference between Opening Price and Closing Price (40 Days ) |
| Average Difference between Highest Price and Lowest Price (5 Days ) |
| Average Difference between Highest Price and Lowest Price (10 Days ) |
| Average Difference between Highest Price and Lowest Price (40 Days ) |
| Volatility |
| Average Turnover for 10 Days |
|  |

**PREPROCESSING**

|  |  |  |
| --- | --- | --- |
| **Technique** | **Applied** | **Remarks** |
| Normalization | YES | The Dataset was scaled between 0 and 1. |
| PCA | NO | The number of features were not large. |
| Missing Values Correcton | YES | Taking average of surrounding values |
| Equalise no of Datapoints in Datasets | YES | Equal no of Datapoints in each dataset were processed. |

**Techniques Applied**

* **Simple Linear Regression**
* **LASSO Regression**
* **Ridge Regression**

**We performed Regularized Linear Regression. We used grid-search based approach to find the best value of alpha and delta (one which gives minimum MSE) for fitting the model.**