### **HOPE LEARNING**

# Machine Learning Assignment - Dr. N. Dilip Raja

## Multilinear Regression model

 $R^2 = 93.58\%$ 

## **SVM** Regression model

| Kernal type | C value | R <sup>2</sup>    |
|-------------|---------|-------------------|
| Linear      | 0.01    | -0.057            |
|             | 0.1     | -0.057            |
|             | 1       | -0.055            |
|             | 10      | -0.039            |
|             | 100     | 0.106             |
|             | 1000    | 0.78              |
| Poly        | 0.01    | -0.057            |
|             | 0.1     | -0.057            |
|             | 1       | -0.057            |
|             | 10      | -0.053            |
|             | 100     | 0.199             |
|             | 1000    | 0.266             |
| rbf         | 0.01    | -0.057            |
|             | 0.1     | -0.057            |
|             | 1       | -0.057            |
|             | 10      | -0.056            |
|             | 100     | -0.05             |
|             | 1000    | 0.006             |
| sigmoid     | 0.01    | -0.057            |
|             | 0.1     | -0.057            |
|             | 1       | -0.057            |
|             | 10      | -0.054            |
|             | 100     | -0.03             |
|             | 1000    | 0.185             |
| precomputed | 0.01    | Not computed      |
|             |         | because of        |
|             |         | technical problem |

## DT Regression model

| Criterion      | Splitter | R <sup>2</sup> (%) |
|----------------|----------|--------------------|
| Squared Error  | Best     | 88.29              |
|                | Random   | 75.9               |
| friedman_mse   | Best     | 90.3               |
|                | Random   | 68.49              |
| absolute_error | Best     | 94.06              |
|                | Random   | 86.99              |
|                | Best     | 93.25              |
|                | Random   | 91.98              |