

## R<sup>2</sup> value And Parameters Used:

| S.NO | ML Regressor  | With split R <sup>2</sup> value | Without split R <sup>2</sup> value |
|------|---------------|---------------------------------|------------------------------------|
| 1    | Multi Linear  | 0.789442                        | 0.7496945                          |
| 2    | SVM           | 0.866339                        | 0.8382747                          |
| 3    | Decision Tree | 0.69733317                      | 0.9986671                          |
| 4    | Random Forest | 0.867752                        | 0.969128                           |

|            |                 |                                    |   |
|------------|-----------------|------------------------------------|---|
| Parameters | Multiple Linear | With split R <sup>2</sup> value    | 'copy_X': True, 'fit_intercept': True, 'n_jobs': None, 'positive': True                       |
|            |                 | Without Split R <sup>2</sup> value | 'copy_X': True, 'fit_intercept': True, 'n_jobs': None, 'positive': True                       |
|            | SVM             | With split R <sup>2</sup> value    | 'C': 3000, 'gamma': 'scale', 'kernel': 'rbf'  |
|            |                 | Without Split R <sup>2</sup> value | 'C': 3000, 'gamma': 'scale', 'kernel': 'rbf'  |
|            | Random Forest   | With split R <sup>2</sup> value    | 'criterion': 'poisson', 'max_features': 'sqrt', 'n_estimators': 100, 'random_state': 0        |
|            |                 | Without Split R <sup>2</sup> value | 'criterion': 'absolute_error', 'max_features': 'sqrt', 'n_estimators': 100, 'random_state': 0 |
|            | Decision Tree   | With split R <sup>2</sup> value    | 'criterion': 'friedman_mse', 'max_features': None, 'splitter': 'best'                         |
|            |                 | Without Split R <sup>2</sup> value | 'criterion': 'poisson', 'max_features': None, 'splitter': 'best'                              |

## Finalised Model:

Decision Tree Regressor - Without data splits , R<sup>2</sup> value is 0.9986671

Used Parameters: 'criterion': 'poisson', 'max\_features': None, 'splitter': 'best'

