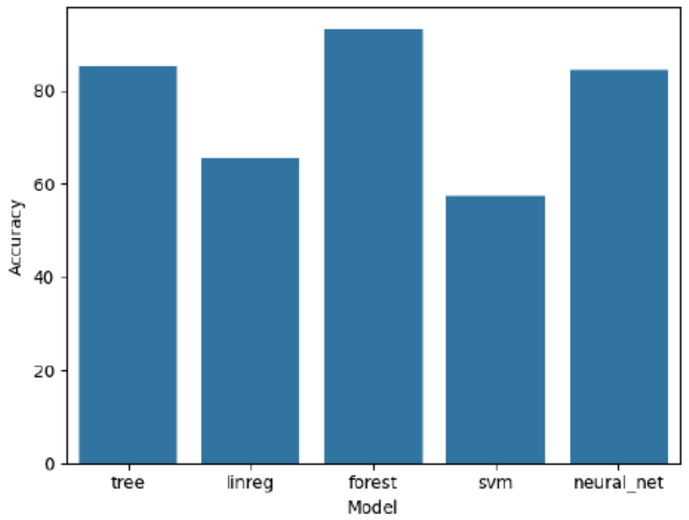
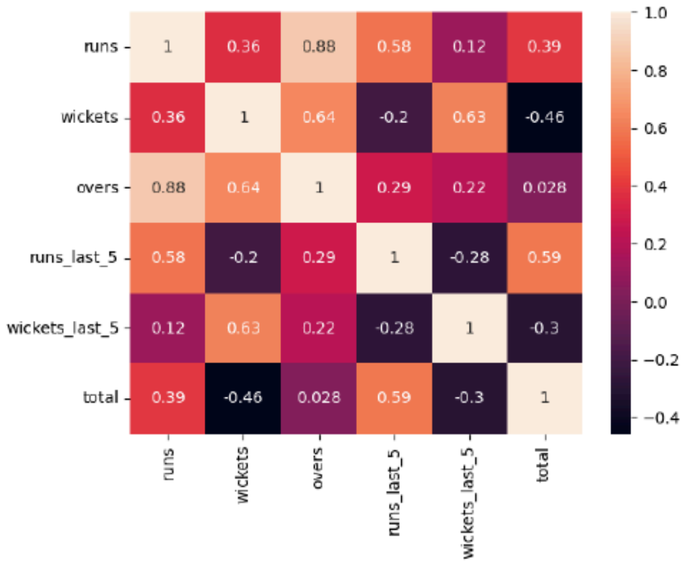
IPL SCORE PREDICTION





Problem Statement :

The Dataset contains ball by ball information of the matches played between IPL Teams of Season 1 to 10, i.e. from 2008 to 2017.
This Machine Learning model adapts a Regression Appoach to predict the score of the First Inning of an IPL Match.

Decision Tree:

This supervised learning method creates a tree-like model of decisions based on input features. It recursively splits the data into subsets to predict the target variable by learning decision rules from the features.

Linear Regression:

A regression technique that models the relationship between the target variable and input features by fitting a straight line. It minimizes the sum of squared differences between actual and predicted values.

Polynomial Regression:

Extends linear regression by fitting a polynomial equation to the data. This approach is useful for capturing non-linear relationships between the features and the target variable.

Random Forest:

An ensemble learning method combining multiple decision trees to improve prediction accuracy. It uses bagging and feature randomness to create robust models for regression or classification tasks.

Lasso Regression:

A regression technique that adds an L1 regularization term to the cost function. It encourages feature selection by shrinking irrelevant feature coefficients to zero, enhancing the model's simplicity and performance.

Support Vector Machine (SVM):

A powerful supervised learning algorithm that constructs hyperplanes to separate data points. In regression, it aims to minimize prediction errors within a specified margin.

Neural Networks:

Inspired by biological neural networks, this algorithm uses layers of interconnected nodes (neurons) to learn complex patterns in data. It's particularly effective for handling large and nonlinear datasets.

Logistic Regression:

Typically used for classification, it models the probability of a categorical target variable. Although less common in regression, it can aid in binary outcomes within the context of your project.

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