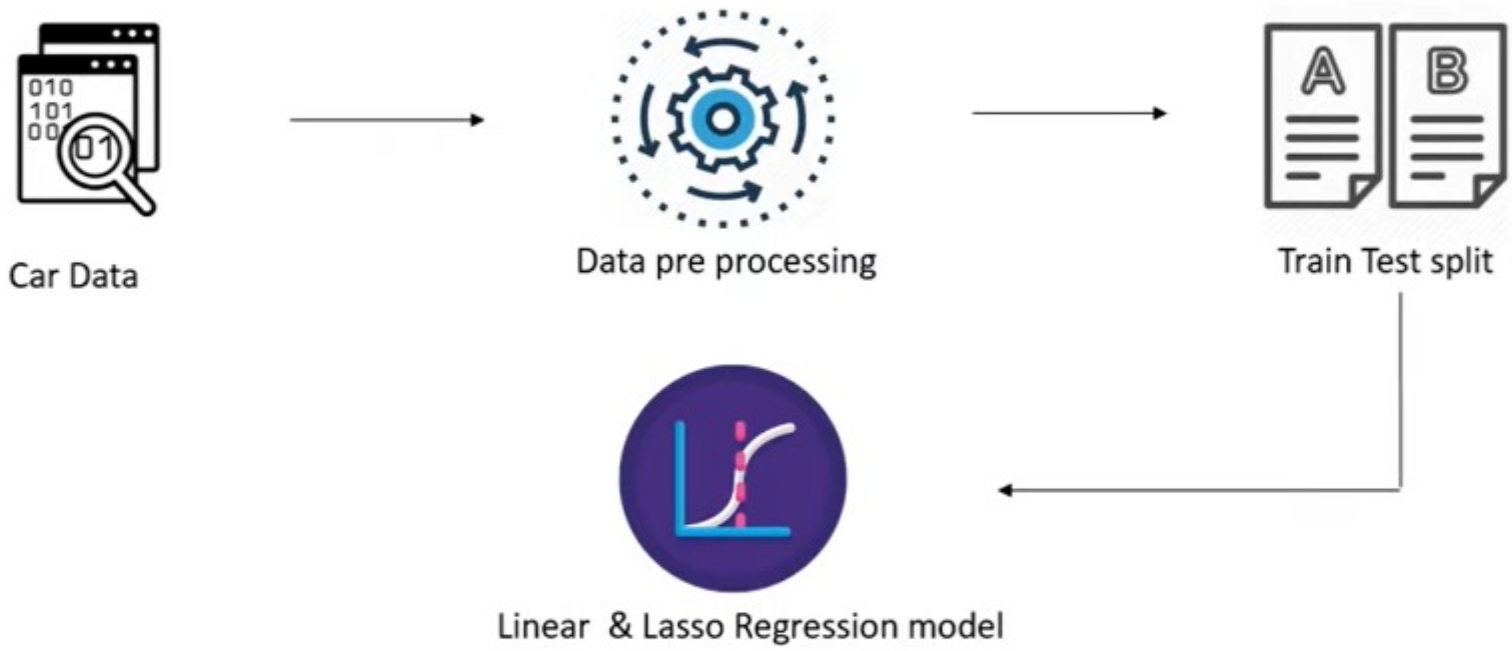
Model Selection

Car Price Prediction Model

Dataset Features:

1. *Car Brand*
2. *Year*
3. *Sold Price*
4. *Present Price*
5. *KMS Driven*
6. *Fuel Type*
7. *Seller Type*
8. *Transmission Type*
9. *Owners*

Work Flow



Model Selection

Car Price Prediction can be done using these Machine Learning Algorithms

There are numerous machine learning algorithms that can be used for car price prediction. The choice of algorithm depends on various factors such as the nature of the data, the size of the dataset, and the specific requirements of the problem. Here are some usable machine learning algorithms for car price prediction:

- Linear Regression: It is a simple and widely used algorithm that assumes a linear relationship between the features and the target variable (car price). It can provide quick and interpretable results.
- Decision Trees: Decision trees can be used for both regression and classification tasks. They recursively split the data based on the features to create a tree-like model. Decision trees can capture complex relationships and are relatively easy to understand.
- Random Forest: Random Forest is an ensemble learning method that combines multiple decision trees. It can provide more accurate predictions compared to a single decision tree and helps reduce overfitting.
- Gradient Boosting: Gradient Boosting algorithms like XGBoost or LightGBM are powerful techniques that sequentially build an ensemble of weak learners (decision trees) by focusing on the mistakes made by the previous learners. They are known for their high accuracy and ability to handle complex datasets.
- Support Vector Machines (SVM): SVM is a supervised learning algorithm that finds an optimal hyperplane to separate data points into different classes. In the case of car price prediction, SVM can be used for regression by mapping the features to a higher-dimensional space.
- Neural Networks: Deep learning techniques like artificial neural networks (ANN) can be used for car price prediction. They can capture complex relationships between features and target variables, but they may require more data and computational resources.
- Bayesian Regression: Bayesian regression techniques, such as Gaussian processes or Bayesian linear regression, can provide uncertainty estimates along with predictions. They are useful when uncertainty quantification is important.
- K-Nearest Neighbors (KNN): KNN is a simple instance-based learning algorithm that predicts the value of a new data point based on the k nearest training samples. It can be effective if there are local patterns in the data.