Machine Learning Project
Car price prediction

1. Introduction

Predicting the price of a car is an importanvt task in the automotive and business sectors. Car prices depend on multiple factors such as brand, year of manufacture, mileage, engine capacity, fuel type, and more.
Machine learning regression techniques can help build accurate predictive models based on historical car data.
In this project, a car price dataset is used to analyze various features and build models that predict the selling price of a vehicle.

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2. Objective

- To apply and compare different machine learning regression algorithms for car price prediction.
- To evaluate model performance using standard regression metrics.
- To determine the most efficient model for predicting car prices.

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3. Implementation

The implementation will be carried out using Python libraries such as:

- **NumPy** and **Pandas**: For data manipulation
- **Scikit-Learn**: For building and evaluating classification models

3.1 Data Preprocessing

- Load the dataset using Pandas.
- Split the data into **training (80%)** and **testing (20%)** sets.

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4. Evaluation Metrics

To evaluate the performance of the models, the following metrics will be used:

- **Accuracy**

- **Confusion Matrix**
- **Precision, Recall, F1-Score**

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5. Results and Comparison

The results of the different classifiers will be compared using accuracy scores and other metrics. A summary table can be created to show the performance of all models.

Project Rules

1. Each team can consist of **6 members from same Section**.
2. Each member of the team must understand and be able to explain **all parts of the code**.

With my best wishes