User Guide for Streamlit-based CarDekho Price Prediction Application

Overview

The **CarDekho Price Prediction Application** is a **Streamlit-based web tool** that allows users to estimate the price of a used car based on various input features. By entering relevant car details, users can get an accurate price prediction, making the buying and selling process more transparent and efficient.

How to Use the Application

1. Input Fields (Left Panel)

Users must enter the following details about the car:

Fuel Type

- Select the fuel type from the available options:
    - **Petrol**
    - **Diesel**
    - **LPG**
    - **CNG**
    - **Electric**

Body Type

- Choose the body type of the car from the dropdown menu:
    - **Hatchback**
    - **Sedan**
    - **SUV**
    - **MUV**
    - **Coupe**

Transmission Type

- Select whether the car has a:
    - **Manual Transmission**
    - **Automatic Transmission**

Number of Previous Owners

- Indicate how many owners the car has had previously (ranging from **0 to 5**).

Brand Selection

- Select the car's **brand** from the available list.

Model Selection

- After selecting the brand, the app will **automatically filter and display** relevant car models.
- Choose the **model** from the dropdown list.

Model Year

- Choose the **manufacturing year** of the car.

Insurance Validity

- Select the type of **insurance coverage**:
    - **Third Party**
    - **Comprehensive**
    - **Zero Depreciation**

Kilometers Driven

- Use the **slider** to specify the number of kilometers the car has been driven (**100 to 100,000 km**).

Mileage (Fuel Efficiency)

- Enter the mileage of the car (**range: 5–50 km/litre**).

Number of Seats

- Select the **number of seats** available in the car.

Car Color

- Choose the **color** of the car.

City of Sale

- Select the **city** where the car is being sold.

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2. Making a Prediction (Right Panel)

Predict Button

- After filling in all the required fields, click the **"Predict"** button to estimate the price of the car.

Output Display

- The app will display the predicted price in the following format:

The estimated price of the [Brand] [Model] is: [Price] lakhs.

Example Workflow

Scenario: Estimating the Price of a BMW 5 Series

1. **Select Fuel Type** → Petrol
2. **Choose Body Type** → Sedan
3. **Pick Transmission Type** → Automatic
4. **Set Number of Previous Owners** → 3
5. **Choose Brand** → BMW
6. **Select Model** → 5 Series (appears after selecting the brand)
7. **Set Model Year** → 2011
8. **Select Insurance Type** → Third Party
9. **Adjust Kilometers Driven** → 100,000 km
10. **Enter Mileage** → 18 km/litre
11. **Set Number of Seats** → 5
12. **Select Color** → Black
13. **Choose City** → Delhi
14. **Press Predict**

Example Output:

The estimated price of the BMW 5 Series is: 21.11 lakhs.

Conclusion

This application provides an easy-to-use interface for estimating used car prices. By integrating machine learning with real-time inputs, users can make **data-driven decisions** when buying or selling vehicles. Future enhancements may include **real-time market integration** and **personalized price recommendations**.