
# *Oasis Infobyte: Data Science Internship*

***Car Price Prediction***

**Description:** The objective of this project is to develop a machine learning model that can accurately predict the price of a car based on its characteristics. This type of model can be useful for both car sellers and buyers to estimate the market value of a vehicle. The dataset is taken from the kaggle

**Dataset :** Car price prediction

**Tools and Libraries:**

- Python: Programming language used for the entire pipeline.
- Pandas & NumPy: For data manipulation and preprocessing.
- Matplotlib & Seaborn: For data visualization.
- Scikit-learn: For machine learning algorithms and model evaluation.

**Key Features:**

- **Data Exploration and Visualization:** Understand the distribution of the dataset and explore relationships between different features and the target variable (car price).
- **Data Preprocessing:** Prepare the data for model training by addressing issues like missing values and scaling.

- **Model Selection:** Choosing and training a classification model, such as Logistic Regression, Decision Tree, or k-Nearest Neighbors (k-NN). Here we choose Random forest regressor algorithm.
- **Model Evaluation:** Assessing the model's performance using metrics like accuracy, precision, recall, and F1 score. Cross-validation may be employed to ensure the model's robustness.
- **Deployment:** Implementing the trained model for predictions on new data, making it practical for real-world applications, such as in gardening or botanical studies.