Project Objectives

Team ID	PNT2022TMID12028
Project Name	Car Resale Value Prediction

OBJECTIVE:

Car Price Prediction project is the ability to predict the price of a used car given various attributes (data) of that car. There is a saying that a car loses 10% of its value the moment the user drives it off a lot. Given that the user would expect that one of the main predictors is the amount of miles driven in the car, since more driving wears down the car. Additionally, the user would expect the brand (make) of the car to also be a factor in the price of a used car, since some brands of cars cost more and may be better made. The user expects to encounter some issues with multidisciplinary since some aspects of cars may be highly correlated. For example, larger cars will probably have larger engines and more doors. Larger engines are correlated with more cylinders.

Classification:

Classification is when the feature to be predicted contains categories of values. Each of these categories is considered as a class into which the predicted value falls and hence has its name, classification., we use a data set that contains information about customers of an online trading platform to classify whether a given customer's car resale value will be highly accurate or not. Because a previous tutorial covered the various preprocessing steps that need to occur before model creation, we skip those details in this tutorial. Instead, we do a detailed study of the different classification algorithms and apply it to the same data set for the sake of comparison.

Regression:

Regression is when the feature to be predicted contains continuous values. Regression refers to the process of predicting a dependent variable by analyzing the relationship between other independent variables. There are several known algorithms that help in elevating these relationships to better predict the value.

Data Preprocessing:

Data preprocessing, a component of data preparation, describes any type of processing performed on raw data to prepare it for another data processing procedure. It has traditionally been an important preliminary step for the data mining process. More recently, data preprocessing techniques have been adapted for training machine learning models and AI models and for running inferences against them. Data preprocessing transforms the data into a format that is more easily and effectively processed in data mining, machine learning and other data science tasks. The techniques are generally used at the earliest stages of the machine learning and AI development pipeline to ensure accurate results.

What is Flask?

Flask is also a Python-based microframework that is used for web application development. It was introduced by Armin Ronacher in the year 2011 as a trial method of joining two solutions i.e., Werkzeug (a server framework) and Jinja2 (a template library).

It was supposed to be a trial run in a zip file that ultimately originates from the positive influence of Flask.

Flask is categorized as a micro framework because it does not depend on external libraries to perform the tasks of a framework. It has its tools, technologies, and libraries to support the functionalities of web application development.

Since this framework is more independent and flexible, many developers prefer to start with Flask.

Key Features: Flask

Some of the features of Flask are:

Lightweight: It is a lightweight framework as it is independent of external libraries. It gives a quick start to the web development process of complex applications.

Independent: Flask gives independent or full control to the developer for creating applications. You can experiment with the architecture or the libraries of the framework.

Integrated Unit Testing: Flask's integrated unit testing system enables faster debugging, robust development, and freedom to experiment.

Secure Cookies: Secure cookie is an attribute of an HTTP request that enables the security of channels and ensures no unauthorized person has access to the text. Flask supports the feature of secure cookies.

Compatible: Flask is compatible with the latest technologies like Machine Learning, Cloud, etc.

Flexible and Scalable: Support WSGI templates that allow flexibility and scalability for web applications.It comes with a built-in server and debugger. Simple and adaptable configurations.