Project:

**Business Objective:**

The fundamental goal here is to model the CO2 emissions as a function of several car engines features.

**Data Set Details:**

The file contains the data for this example. Here the number of variables (columns) is 12, and the number of instances (rows) is 7385. In that way, this problem has the 12 following variables:

**make**, car brand under study.

**model**, the specific model of the car.

**vehicle\_class**, car body type of the car.

**engine\_size**, size of the car engine, in Litres.

**cylinders**, number of cylinders.

**transmission**, "A" for 'Automatic', "AM" for 'Automated manual', "AS" for 'Automatic with **select shift'**, "AV" for 'Continuously variable', "M" for 'Manual'.

**fuel\_type**, "X" for 'Regular gasoline', "Z" for 'Premium gasoline', "D" for 'Diesel', "E" for 'Ethanol (E85)', "N" for 'Natural gas'.

**fuel\_consumption\_city**, City fuel consumption ratings, in litres per 100 kilometres.

**fuel\_consumption\_hwy**, Highway fuel consumption ratings, in litres per 100 kilometres.

**fuel\_consumption\_comb(l/100km)**, the combined fuel consumption rating (55% city, 45% highway), in L/100 km.

**fuel\_consumption\_comb(mpg)**, the combined fuel consumption rating (55% city, 45% highway), in miles per gallon (mpg).

**co2\_emissions**, the tailpipe emissions of carbon dioxide for combined city and highway driving, in grams per kilometer.

**Acceptance Criterion:** Need to deploy the end results using Flask /Streamlit etc

**Milestones:**

30 days to complete the Project

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| **Milestone** | **Duration** | **Task start - End Date** |
| Kick off and Business Objective discussion | 1 day |  |
| Data set Details | 1 Week – 1 ½ week |  |
| EDA | 1 Weeks – 1 ½ week |  |
| Model Building | 1 Week – 1 ½ week |  |
| Model Evaluation | 1 Week |  |
| Feedback |
| Deployment |  |
| Final presentation | 1 day |  |

Protocols:

1. All participants should adhere to agreed timelines and timelines will not be extended.
2. All the documentation – Final presentation and R/python code to be submitted before the final presentation day.
3. All the participants must attend review meetings.