Hello Professor Lima, we are group 5, please let us introduce our project proposal. We are going to analyze a dataset of car evaluation.

First, Is our Problem Definition. When we searching for datasets, we found a dataset about cars. It happens that our team members are car fans, and it’s about car evaluation, we think it would be meaningful if we can make evaluation on different cars. After checking the dataset, we found the structure really good. So we decided to make a model on Car Evaluation.

Second, is to introduce our dataset. In the dataset there are 1728 pieces of data about the quality of 1728 cars and their performance criteria.

The model evaluates cars according to the following concept structure:

（下面大写的部分是分了几个大类，并没有体现在数据集中， 数据集里的全是子类（小写的部分））

CAR: car acceptability  
… PRICE: overall price  
…… buying: buying price  
…… maint: price of the maintenance  
… TECH: technical characteristics  
…… COMFORT: comfort  
……… doors: number of doors  
……… persons: capacity in terms of persons to carry  
……… lug\_boot: the size of luggage boot  
…… safety: estimated safety of the car  
  
Input attributes are printed in lowercase. Besides the target concept (CAR), the model includes three intermediate concepts: PRICE, TECH, COMFORT.   
  
The Car Evaluation Database contains examples with the structural information removed, i.e., directly relates CAR to the six input attributes: buying, maint, doors, persons, lug\_boot, safety.  
  
Because of known underlying concept structure, this database may be particularly useful for testing constructive induction and structure discovery methods.

The attribute Information is below:

Class Values:

unacc, acc, good, vgood

Attributes:

buying: vhigh, high, med, low.

maint: vhigh, high, med, low.

doors: 2, 3, 4, 5more.

persons: 2, 4, more.

lug\_boot: small, med, big.

safety: low, med, high.

The last part is our methods and goals. We will first quantify the attributes, make them all numbers(举个例子), Then we use Scikit-learn to build a model, our goal is to evaluate a new car by its five attributes.

Thank you.