

## **ANUBAVAM TECHNOLOGIES PVT LTD**

### **AI/ML Evaluation Test**

Consider the below scenario, where,

- An automotive service chain is launching its new grand service station this weekend. They offer to service a wide variety of cars.
- The current capacity of the station is to check 315 cars thoroughly per day. As an inaugural offer, they claim to freely check all cars that arrive on their launch day and report whether they need servicing or not.
- Unexpectedly, they get 450 cars. The service men won't work longer than the working hours but the data analysts have to! How can a AIML Engineer save a day for them i.e., AIML Engineer has been a data set which contains some attributes of car that can be easily measured and won't require much time and can give conclusion that service is needed for that or not.

**For the above such scenario, as a AIML Engineer, develop Machine Learning model and classify whether the service is required or not for any car received to the station.**

Please consider the datasets given in other two files named as,

1. serviceTrainData
2. serviceTestData

### **DATA SET DESCRIPTION:**

1. **OilQual: Oil Quality:** Motor oil quality matters for several reasons. One of the big ones is higher quality motor oil can save you money on repairs. ... Better motor oil is also likely to improve performance, as all the parts of the engine can run more smoothly. This can mean a more responsive car and better fuel economy.
2. **Engineperf: Performance of engine:** The performance of an engine is an indication of the degree of success with which the conversion of chemical energy contained in the fuel is done into useful mechanical work.

3. **NormMileage: Normal mileage of car:** Mileage is just one indicator of a vehicle condition. Theoretically, a vehicle that has covered more miles has more wear and tear, but a car with 60,000 miles on the odometer can easily be in worse shape than one with 120,000 miles.

4. **Tyrewear:** Uneven tire wear is usually caused by improper alignment, overinflation, underinflation or a worn out suspension. ...Tires are an extremely important component of your car, and it's a good idea to check them periodically to see how they're faring.

5. **HVAC wear:** The term HVAC stands for 'Heating, Ventilation and Air Conditioning'. HVAC also provides the heating of air along with the car's air conditioning system. The air is heated using the heat from the engine's cooling system. Today, most cars employ the HVAC system

6. **Service:** Service of car is required or not.