

Objective:

Your task is to write a small Python that predicts the **engine rating** based on the inspection parameters using only the provided dataset. You need to find all the cases/outliers where the rating has been given incorrectly as compared to current condition of the engine.

This task is designed to test your Python ability, your knowledge of Data Science techniques, your ability to find trends, outliers, relative importance of variables with deviation in target variable and your ability to work effectively, efficiently and independently within a commercial setting.

This task is designed as well to test your hyper-tuning abilities or lateral thinking.

Deliverables:

- One Python Script
- Summary of your insights
- List of cases which are outliers/incorrectly rated as high or low and it should be backed with analysis/reasons.
- model object files for reproducibility.

Your solution should at a minimum do the following:

- Load the data into memory
- Prepare the data for modelling
- EDA of the variables
- Build a model on training data
- Test the model on testing data
- Provide some measure of performance
- Outlier analysis and detection

Please answer the following:

1. Briefly describe your approach to this problem and the steps you took
2. Basics:
 - a. How well does your model work?
 - b. How do you know for sure that's how well it works?
 - c. What stats did you use to prove its predictive performance and why?
 - d. What issues did you encounter?
 - e. What insights did you obtain from this data? For example: What features are important? Why? What visualisations help you understand the data?
3. Next steps:
 - a. What other data (if any) would have been useful?
 - b. What are some other things you would have done if you had more time?

 **ML Data** - Please refer this link for DataSet