

Sub-questions for Problem 2

1. Why did you choose the particular algorithm?
A Random Tree Classifier is an intuitive yet effective algorithm with low computational cost. It is well suited for the kepler dataset, as is well documented by several research papers on the same.
2. What are the different tuning methods used for the algorithm?
The algorithm is tuned by using cross validation on the max_depth parameter in my model. We can also use cross validation on various other parameters to attain an even more accurate result.
3. Did you consider any other choice of algorithm? Why or why not?
I did consider using an artificial neural network for this task. However, its higher computational complexity as well as historical performance on this dataset made me choose the Random Tree Classifier.
4. What is the accuracy?
The accuracy of my model is 88.98%
5. What are the different types of metrics that can be used to evaluate the model?
Metrics such as accuracy and the confusion matrix of the predictions can be used to evaluate the model.