

## Project Development Phase Model Performance Test

Date	18 November 2022
Team ID	PNT2022TMID00199
Project Name	Project - Detection of Parkinson's Disease
Maximum Marks	10 Marks

### Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot																														
1.	Metrics	<b>Classification Model:</b> Confusion Matrix Accuracy Score Classification Report	<pre>In [17]: from sklearn.metrics import accuracy_score          accuracy_score(y_test,preds)  Out[17]: 0.7666666666666667  In [18]: from sklearn import metrics          metrics.confusion_matrix(y_test,preds)  Out[18]: array([[13,  2],                 [ 5, 10]])  In [39]: from sklearn.metrics import classification_report          print(classification_report(y_test, preds))</pre> <table><thead><tr><th></th><th>precision</th><th>recall</th><th>f1-score</th><th>support</th></tr></thead><tbody><tr><td>0</td><td>0.72</td><td>0.87</td><td>0.79</td><td>15</td></tr><tr><td>1</td><td>0.83</td><td>0.67</td><td>0.74</td><td>15</td></tr><tr><td>accuracy</td><td></td><td></td><td>0.77</td><td>30</td></tr><tr><td>macro avg</td><td>0.78</td><td>0.77</td><td>0.76</td><td>30</td></tr><tr><td>weighted avg</td><td>0.78</td><td>0.77</td><td>0.76</td><td>30</td></tr></tbody></table>		precision	recall	f1-score	support	0	0.72	0.87	0.79	15	1	0.83	0.67	0.74	15	accuracy			0.77	30	macro avg	0.78	0.77	0.76	30	weighted avg	0.78	0.77	0.76	30
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2.	Tune the Model	Hyperparameter Tuning Validation Method	<pre>In [14]: from sklearn.ensemble import RandomForestClassifier           classifier = RandomForestClassifier(n_estimators=100)          classifier.fit(X_train,y_train)  Out[14]: RandomForestClassifier()</pre>																														