

Project Development Phase Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID36582
Project Name	Exploratory Analysis of Rainfall Data in India for Agriculture
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	Classification Model: Confusion Matrix - Accuracy Score- Classification Report -	<pre>y_pred = cat.predict(x_test) print(confusion_matrix(y_test,y_pred)) print(accuracy_score(y_test,y_pred)) print(classification_report(y_test,y_pred))</pre> <pre>[[21510 1207] [2795 3580]] 0.8624364086346762</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>0.89</td><td>0.95</td><td>0.91</td><td>22717</td></tr><tr><td>1</td><td>0.75</td><td>0.56</td><td>0.64</td><td>6375</td></tr><tr><td>accuracy</td><td></td><td></td><td>0.86</td><td>29092</td></tr><tr><td>macro avg</td><td>0.82</td><td>0.75</td><td>0.78</td><td>29092</td></tr><tr><td>weighted avg</td><td>0.85</td><td>0.86</td><td>0.85</td><td>29092</td></tr></tbody></table>		precision	recall	f1-score	support	0	0.89	0.95	0.91	22717	1	0.75	0.56	0.64	6375	accuracy			0.86	29092	macro avg	0.82	0.75	0.78	29092	weighted avg	0.85	0.86	0.85	29092
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2.	Tune the Model	Hyperparameter Tuning – Validation Method -	<pre>{'learning_rate': 0.1, 'max_depth': 8} 0.8892227301457538</pre> <pre>Accuracy:83.11 % Standard Deviation:17.73 %</pre>																														