

## Project Development Phase

### Model Performance Test

Date	11 November 2022
Team ID	PNT2022TMID04534
Project Name	Exploratory Analysis of Rainfall Data in India for Agriculture
Maximum Marks	8 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>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>																														