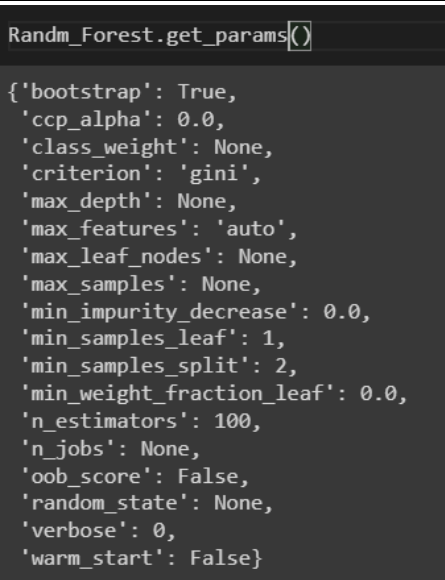


## Project Development Phase Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID17010
Project Name	Project - Exploratory Analysis of RainFall Data in India for Agriculture
Maximum Marks	10 Marks

### Model Performance Testing:

S.No.	Parameter	Values	Screenshot
1.	Model Summary	<b>Parameter values:</b> 'bootstrap': True, 'ccp_alpha': 0.0, 'class_weight': None, 'criterion': 'gini', 'max_depth': None, 'max_features': 'auto', 'max_leaf_nodes': None, 'max_samples': None, 'min_impurity_decrease': 0.0, 'min_samples_leaf': 1, 'min_samples_split': 2, 'min_weight_fraction_leaf': 0.0, 'n_estimators': 100, 'n_jobs': None, 'oob_score': False, 'random_state': None, 'verbose': 0, 'warm_start': False	 <pre> Randm_Forest.get_params()  {'bootstrap': True,  'ccp_alpha': 0.0,  'class_weight': None,  'criterion': 'gini',  'max_depth': None,  'max_features': 'auto',  'max_leaf_nodes': None,  'max_samples': None,  'min_impurity_decrease': 0.0,  'min_samples_leaf': 1,  'min_samples_split': 2,  'min_weight_fraction_leaf': 0.0,  'n_estimators': 100,  'n_jobs': None,  'oob_score': False,  'random_state': None,  'verbose': 0,  'warm_start': False}           </pre>

2.	Accuracy	<p>Training Accuracy - 99.99083367707045%</p> <p>Validation Accuracy - 85.040561%</p> <p><b>Classification Report</b> containing the Precision, Recall, F1-score, support and accuracy of the Random Forest model.</p>	<pre>print("Accuracy of the model: ",metrics.accuracy_score(y_test,y_pred)) Accuracy of the model:  99.99312525780283 %  max_acc=max(acc) model_m=m[acc.index(max_acc)] print(model_m, "has the maximum Testing accuracy") print("Max accuracy ",max_acc*100,"%")  Random_Forest has the maximum Testing accuracy Max accuracy  85.04056097896328 %</pre> <table><thead><tr><th></th><th>precision</th><th>recall</th><th>f1-score</th><th>support</th></tr></thead><tbody><tr><td>No</td><td>0.87</td><td>0.95</td><td>0.91</td><td>11328</td></tr><tr><td>Yes</td><td>0.75</td><td>0.49</td><td>0.59</td><td>3218</td></tr><tr><td>accuracy</td><td></td><td></td><td>0.85</td><td>14546</td></tr><tr><td>macro avg</td><td>0.81</td><td>0.72</td><td>0.75</td><td>14546</td></tr><tr><td>weighted avg</td><td>0.84</td><td>0.85</td><td>0.84</td><td>14546</td></tr></tbody></table>		precision	recall	f1-score	support	No	0.87	0.95	0.91	11328	Yes	0.75	0.49	0.59	3218	accuracy			0.85	14546	macro avg	0.81	0.72	0.75	14546	weighted avg	0.84	0.85	0.84	14546
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