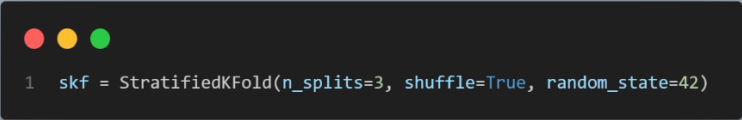


Project Development Phase

Model Performance test

|                |                                 |
|----------------|---------------------------------|
| Date:          | 24-06-2024                      |
| ID:            | Swagath nalla                   |
| Project        | Online Payments Fraud Detection |
| Maximum Marks: | 10                              |

| S.No                | Parameter | Values   | Screenshot   |        |       |                     |          |                   |          |           |          |        |          |          |          |         |         |
|---------------------|-----------|--|--|--------|-------|---------------------|----------|-------------------|----------|-----------|----------|--------|----------|----------|----------|---------|---------|
| 1.                  | Metrics   | Classification Model:<br>BalancedRandom ForestClassifier | <table><tr><th>Metric</th><th>Value</th></tr><tr><td>Validation Accuracy</td><td>0.999568</td></tr><tr><td>Balanced Accuracy</td><td>0.848731</td></tr><tr><td>Precision</td><td>0.955796</td></tr><tr><td>Recall</td><td>0.697505</td></tr><tr><td>F1 Score</td><td>0.806474</td></tr><tr><td>ROC AUC</td><td>0.99884</td></tr></table> | Metric | Value | Validation Accuracy | 0.999568 | Balanced Accuracy | 0.848731 | Precision | 0.955796 | Recall | 0.697505 | F1 Score | 0.806474 | ROC AUC | 0.99884 |
| Metric              | Value     |  |  |        |       |                     |          |                   |          |           |          |        |          |          |          |         |         |
| Validation Accuracy | 0.999568  |  |  |        |       |                     |          |                   |          |           |          |        |          |          |          |         |         |
| Balanced Accuracy   | 0.848731  |  |  |        |       |                     |          |                   |          |           |          |        |          |          |          |         |         |
| Precision           | 0.955796  |  |  |        |       |                     |          |                   |          |           |          |        |          |          |          |         |         |
| Recall              | 0.697505  |  |  |        |       |                     |          |                   |          |           |          |        |          |          |          |         |         |
| F1 Score            | 0.806474  |  |  |        |       |                     |          |                   |          |           |          |        |          |          |          |         |         |
| ROC AUC             | 0.99884   |  |  |        |       |                     |          |                   |          |           |          |        |          |          |          |         |         |

|    |                |  |  |
|----|----------------|--|--|
| 2. | Tune the Model | <p><b>Hyperparameter Tuning:</b> Using RandomisedSearchCV, GridSearchCV</p> <p><b>Validation Method:</b> Stratified Cross Validation</p> | <pre>1   BRFC   {'max_depth': None, 'min_samples_leaf': 1, 'min_samples_split': 5, 'n_estimators': 500}</pre>  |
|----|----------------|--|--|