**TASK 10**

Accuracies For Each Model:

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| --- | --- | --- |
| **S. No** | **Model Name** | **Accuracies** |
| **1** | Logistic Regression | 0.837398 |
| **2** | Decision Tree | 0.666667 |
| **3** | Random Forest | 0.788618 |
| **4** | KNN | 0.780488 |
| **5** | SVM | 0.821138 |
| **6** | Naive Bayes | 0.821138 |

Accuracy Of the Best Model:

|  |  |  |
| --- | --- | --- |
| **S. No** | **Model Name** | **Accuracies** |
| **1** | Logistic Regression | 0.837398 |

Accuracies For Each Model with GridSearchCV:

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| --- | --- | --- | --- |
| **S. No** | **Model Name** | **Accuracies** | **Hyperparameters** |
| **1** | Logistic Regression | 0.837398 | {'C': 0.1, 'solver': 'lbfgs'} |
| **2** | Decision Tree | 0.829268 | {'criterion': 'gini', 'max\_depth': 1, 'min\_samples\_split': 2} |
| **3** | Random Forest | 0.829268 | {'criterion': 'entropy', 'max\_depth': 5, 'n\_estimators': 1000} |
| **4** | KNN | 0.796748 | {'leaf\_size': 10, 'n\_neighbors': 9} |
| **5** | SVM | 0.829268 | {'C': 0.1, 'kernel': 'linear'} |
| **6** | Naive Bayes | 0.837398 | {'var\_smoothing': 1.0} |

Accuracy Of the Best Model with GridSearchCV:

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No** | **Model Name** | **Accuracies** | **Hyperparameters** |
| **1** | Logistic Regression | 0.837398 | {'C': 0.1, 'solver': 'lbfgs'} |
| **2** | Naive Bayes | 0.837398 | {'var\_smoothing': 1.0} |