**Table 5. GridSearchCV Results for Clusters based on rainfall data and using train test split**

|  |  |  |  |
| --- | --- | --- | --- |
| **Model** | **Best Score** | **Accuracy Score** | **Best Parameters** |
| Support Vector Machine | 0.293506 | 0.461538 | {'C': 1, 'coef0': 0.0, 'degree': 2, 'kernel': 'rbf', 'probability': True} |
| Random Forest | 0.320779 | 0.230769 | {'criterion': 'entropy', 'max\_depth': None, 'min\_samples\_leaf': 2, 'min\_samples\_split': 10, 'n\_estimators': 10} |
| Logistic Regression | 0.266234 | 0.384615 | {'C': 1, 'penalty': 'l1'} |
| Naive Bayes Gaussian | 0.08355 | 0.153846 | {} |
| Naive Bayes Multinomial | 0.312121 | 0.461538 | {'alpha': 0.1} |
| Decision Tree | 0.238528 | 0.307692 | {'criterion': 'entropy', 'max\_depth': None, 'min\_samples\_leaf': 4, 'min\_samples\_split': 2} |
| Linear Discriminant Analysis | 0.22987 | 0.153846 | {} |