|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Model** | **F1-Score Weighted** | **Precision Weighted** | **Recall Weighted** | **Accuracy** | **ROC AUC OvO Weighted** |
| Logistic Regression | 0.6728 | 0.6896 | 0.7229 | 0.7229 | 0.6861 |
| Gaussian Naive Bayes | 0.567 | 0.6934 | 0.5492 | 0.5492 | 0.6382 |
| K-Nearest Neighbors | 0.6232 | 0.6051 | 0.6616 | 0.6616 | 0.523 |
| Decision Tree | 0.6324 | 0.6377 | 0.6414 | 0.6328 | 0.5474 |
| Support Vector Classifier | 0.6043 | 0.52 | 0.7211 | 0.7211 | 0.6309 |
| Random Forest | 0.6733 | 0.6695 | 0.7178 | 0.7281 | 0.6598 |
| Gradient Boosting | 0.6665 | 0.6557 | 0.7024 | 0.7007 | 0.6354 |
| AdaBoost | 0.6675 | 0.6601 | 0.6956 | 0.6956 | 0.616 |
| Linear Discriminant Analysis | 0.6925 | 0.6886 | 0.7245 | 0.7245 | 0.6841 |

After hyper parameter

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | Precision | Recall | F1-Score | Accuracy |
| Logistic Regression | 0.75 | 0.78 | 0.77 | 0.78 |
| Gaussian Naive Bayes | 0.78 | 0.49 | 0.55 | 0.49 |
| K-Nearest Neighbors | 0.77 | 0.8 | 0.78 | 0.8 |
| Decision Tree | 0.7 | 0.76 | 0.72 | 0.76 |
| Support Vector Classifier | 0.69 | 0.83 | 0.75 | 0.83 |
| Random Forest | 0.75 | 0.79 | 0.77 | 0.79 |
| Gradient Boosting | 0.71 | 0.78 | 0.74 | 0.78 |
| AdaBoost | 0.75 | 0.74 | 0.74 | 0.8 |
| Linear Discriminant | 0.75 | 0.75 | 0.75 | 0.75 |