**The Final Machine Learning Classification Algorithm:**

**1.DecisionTree(my f1 score and type 1 error is less compare to other models) 2.Randomforest( my f1 score and type 1 error is less compare to other models)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **MODELS** | **CLASS** | **ACCURACY** | **PRECISION** | **RECALL** | **F1-SCORE** | **TYPE-1 ERROR** |
| **1.RANDOMFOREST** | **0**  **1** | **100%** | **100%**  **100%** | **100%**  **100%** | **100%**  **100%** | **10** |
| **2.DECISIONTREE** | **0**  **1** | **100%** | **100%**  **100%** | **100%**  **100%** | **100%**  **100%** | **5** |
| **3.LOGISTICREGRESSION** | **0**  **1** | **100%** | **62%**  **99%** | **98%**  **72%** | **76%**  **83%** | 34 |
| **4.KNEIGHBORS** | **0**  **1** | **97%** | **96%**  **98%** | **98%**  **96%** | **97%**  **97%** | **58** |
| **5.NAIVEBAYES** | **0**  **1** | **96%** | **94%**    **98%** | **97%**  **94%** | **96%**  **96%** | **68** |
| **6.SUPPORTVECTOR** | **0**  **1** | **85%** | **98%**  **72%** | **78%**  **97%** | **87%**  **83%** | **766** |