\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 50 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.94 1.00 0.97 146

1 1.00 0.29 0.44 14

accuracy 0.94 160

macro avg 0.97 0.64 0.71 160

weighted avg 0.94 0.94 0.92 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.97 1.00 0.98 146

1 1.00 0.64 0.78 14

accuracy 0.97 160

macro avg 0.98 0.82 0.88 160

weighted avg 0.97 0.97 0.97 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.93 0.96 146

1 0.57 0.93 0.70 14

accuracy 0.93 160

macro avg 0.78 0.93 0.83 160

weighted avg 0.96 0.93 0.94 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.96 0.65 0.78 146

1 0.16 0.71 0.27 14

accuracy 0.66 160

macro avg 0.56 0.68 0.52 160

weighted avg 0.89 0.66 0.73 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.98 0.62 0.76 146

1 0.18 0.86 0.29 14

accuracy 0.64 160

macro avg 0.58 0.74 0.52 160

weighted avg 0.91 0.64 0.72 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.94 0.96 146

1 0.57 0.86 0.69 14

accuracy 0.93 160

macro avg 0.78 0.90 0.82 160

weighted avg 0.95 0.93 0.94 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 100 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.94 1.00 0.97 146

1 1.00 0.29 0.44 14

accuracy 0.94 160

macro avg 0.97 0.64 0.71 160

weighted avg 0.94 0.94 0.92 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.95 1.00 0.98 146

1 1.00 0.50 0.67 14

accuracy 0.96 160

macro avg 0.98 0.75 0.82 160

weighted avg 0.96 0.96 0.95 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.90 0.95 146

1 0.48 0.93 0.63 14

accuracy 0.91 160

macro avg 0.74 0.92 0.79 160

weighted avg 0.95 0.91 0.92 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.97 0.68 0.80 146

1 0.19 0.79 0.31 14

accuracy 0.69 160

macro avg 0.58 0.73 0.55 160

weighted avg 0.90 0.69 0.76 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.96 0.61 0.74 146

1 0.15 0.71 0.25 14

accuracy 0.62 160

macro avg 0.55 0.66 0.50 160

weighted avg 0.89 0.62 0.70 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.92 0.96 146

1 0.54 0.93 0.68 14

accuracy 0.93 160

macro avg 0.77 0.93 0.82 160

weighted avg 0.95 0.93 0.93 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 150 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.93 0.99 0.96 146

1 0.75 0.21 0.33 14

accuracy 0.93 160

macro avg 0.84 0.60 0.65 160

weighted avg 0.91 0.93 0.91 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.97 0.97 146

1 0.69 0.64 0.67 14

accuracy 0.94 160

macro avg 0.83 0.81 0.82 160

weighted avg 0.94 0.94 0.94 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.92 0.95 146

1 0.50 0.86 0.63 14

accuracy 0.91 160

macro avg 0.74 0.89 0.79 160

weighted avg 0.94 0.91 0.92 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.95 0.69 0.80 146

1 0.17 0.64 0.26 14

accuracy 0.69 160

macro avg 0.56 0.67 0.53 160

weighted avg 0.88 0.69 0.75 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.96 0.58 0.72 146

1 0.14 0.71 0.24 14

accuracy 0.59 160

macro avg 0.55 0.65 0.48 160

weighted avg 0.88 0.59 0.68 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.98 0.90 0.94 146

1 0.44 0.79 0.56 14

accuracy 0.89 160

macro avg 0.71 0.84 0.75 160

weighted avg 0.93 0.89 0.91 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 200 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.94 1.00 0.97 146

1 1.00 0.29 0.44 14

accuracy 0.94 160

macro avg 0.97 0.64 0.71 160

weighted avg 0.94 0.94 0.92 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.99 0.98 146

1 0.90 0.64 0.75 14

accuracy 0.96 160

macro avg 0.93 0.82 0.86 160

weighted avg 0.96 0.96 0.96 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.90 0.94 146

1 0.46 0.86 0.60 14

accuracy 0.90 160

macro avg 0.72 0.88 0.77 160

weighted avg 0.94 0.90 0.91 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.97 0.71 0.82 146

1 0.21 0.79 0.33 14

accuracy 0.72 160

macro avg 0.59 0.75 0.58 160

weighted avg 0.91 0.72 0.78 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.98 0.66 0.79 146

1 0.20 0.86 0.32 14

accuracy 0.68 160

macro avg 0.59 0.76 0.56 160

weighted avg 0.91 0.68 0.75 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.93 0.96 146

1 0.55 0.86 0.67 14

accuracy 0.93 160

macro avg 0.77 0.89 0.81 160

weighted avg 0.95 0.93 0.93 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 250 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.94 0.99 0.96 146

1 0.80 0.29 0.42 14

accuracy 0.93 160

macro avg 0.87 0.64 0.69 160

weighted avg 0.92 0.93 0.92 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.98 0.92 0.95 146

1 0.48 0.79 0.59 14

accuracy 0.91 160

macro avg 0.73 0.85 0.77 160

weighted avg 0.93 0.91 0.92 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.97 0.92 0.94 146

1 0.45 0.71 0.56 14

accuracy 0.90 160

macro avg 0.71 0.82 0.75 160

weighted avg 0.93 0.90 0.91 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.97 0.60 0.74 146

1 0.16 0.79 0.26 14

accuracy 0.61 160

macro avg 0.56 0.69 0.50 160

weighted avg 0.90 0.61 0.70 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.93 0.64 0.76 146

1 0.12 0.50 0.19 14

accuracy 0.63 160

macro avg 0.52 0.57 0.48 160

weighted avg 0.86 0.63 0.71 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.94 0.96 146

1 0.57 0.86 0.69 14

accuracy 0.93 160

macro avg 0.78 0.90 0.82 160

weighted avg 0.95 0.93 0.94 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 300 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.94 0.99 0.96 146

1 0.80 0.29 0.42 14

accuracy 0.93 160

macro avg 0.87 0.64 0.69 160

weighted avg 0.92 0.93 0.92 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.97 0.97 146

1 0.71 0.71 0.71 14

accuracy 0.95 160

macro avg 0.84 0.84 0.84 160

weighted avg 0.95 0.95 0.95 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.92 0.96 146

1 0.54 0.93 0.68 14

accuracy 0.93 160

macro avg 0.77 0.93 0.82 160

weighted avg 0.95 0.93 0.93 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.97 0.67 0.79 146

1 0.19 0.79 0.30 14

accuracy 0.68 160

macro avg 0.58 0.73 0.55 160

weighted avg 0.90 0.68 0.75 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.96 0.60 0.73 146

1 0.14 0.71 0.24 14

accuracy 0.61 160

macro avg 0.55 0.66 0.49 160

weighted avg 0.89 0.61 0.69 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.97 0.92 0.94 146

1 0.45 0.71 0.56 14

accuracy 0.90 160

macro avg 0.71 0.82 0.75 160

weighted avg 0.93 0.90 0.91 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 350 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.94 0.99 0.96 146

1 0.67 0.29 0.40 14

accuracy 0.93 160

macro avg 0.80 0.64 0.68 160

weighted avg 0.91 0.93 0.91 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.96 0.99 0.98 146

1 0.89 0.57 0.70 14

accuracy 0.96 160

macro avg 0.92 0.78 0.84 160

weighted avg 0.95 0.96 0.95 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.91 0.95 146

1 0.48 0.86 0.62 14

accuracy 0.91 160

macro avg 0.73 0.88 0.78 160

weighted avg 0.94 0.91 0.92 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.96 0.62 0.75 146

1 0.15 0.71 0.25 14

accuracy 0.62 160

macro avg 0.55 0.67 0.50 160

weighted avg 0.89 0.62 0.71 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.94 0.51 0.66 146

1 0.11 0.64 0.19 14

accuracy 0.53 160

macro avg 0.53 0.58 0.43 160

weighted avg 0.87 0.53 0.62 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.91 0.95 146

1 0.48 0.86 0.62 14

accuracy 0.91 160

macro avg 0.73 0.88 0.78 160

weighted avg 0.94 0.91 0.92 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 400 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.94 0.99 0.96 146

1 0.80 0.29 0.42 14

accuracy 0.93 160

macro avg 0.87 0.64 0.69 160

weighted avg 0.92 0.93 0.92 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.99 0.98 146

1 0.90 0.64 0.75 14

accuracy 0.96 160

macro avg 0.93 0.82 0.86 160

weighted avg 0.96 0.96 0.96 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 1.00 0.92 0.96 146

1 0.54 1.00 0.70 14

accuracy 0.93 160

macro avg 0.77 0.96 0.83 160

weighted avg 0.96 0.93 0.93 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.97 0.64 0.77 146

1 0.17 0.79 0.28 14

accuracy 0.65 160

macro avg 0.57 0.71 0.53 160

weighted avg 0.90 0.65 0.73 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.58 0.73 146

1 0.15 0.79 0.26 14

accuracy 0.60 160

macro avg 0.56 0.68 0.49 160

weighted avg 0.89 0.60 0.69 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.98 0.92 0.95 146

1 0.48 0.79 0.59 14

accuracy 0.91 160

macro avg 0.73 0.85 0.77 160

weighted avg 0.93 0.91 0.92 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 450 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.95 0.99 0.97 146

1 0.88 0.50 0.64 14

accuracy 0.95 160

macro avg 0.91 0.75 0.80 160

weighted avg 0.95 0.95 0.94 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.96 0.96 146

1 0.60 0.64 0.62 14

accuracy 0.93 160

macro avg 0.78 0.80 0.79 160

weighted avg 0.93 0.93 0.93 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.97 0.92 0.94 146

1 0.45 0.71 0.56 14

accuracy 0.90 160

macro avg 0.71 0.82 0.75 160

weighted avg 0.93 0.90 0.91 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.96 0.65 0.78 146

1 0.16 0.71 0.27 14

accuracy 0.66 160

macro avg 0.56 0.68 0.52 160

weighted avg 0.89 0.66 0.73 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.96 0.62 0.75 146

1 0.15 0.71 0.25 14

accuracy 0.62 160

macro avg 0.55 0.67 0.50 160

weighted avg 0.89 0.62 0.71 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.98 0.92 0.95 146

1 0.50 0.79 0.61 14

accuracy 0.91 160

macro avg 0.74 0.86 0.78 160

weighted avg 0.94 0.91 0.92 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 500 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.94 0.99 0.96 146

1 0.80 0.29 0.42 14

accuracy 0.93 160

macro avg 0.87 0.64 0.69 160

weighted avg 0.92 0.93 0.92 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.95 0.96 146

1 0.59 0.71 0.65 14

accuracy 0.93 160

macro avg 0.78 0.83 0.80 160

weighted avg 0.94 0.93 0.93 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.90 0.95 146

1 0.48 0.93 0.63 14

accuracy 0.91 160

macro avg 0.74 0.92 0.79 160

weighted avg 0.95 0.91 0.92 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.96 0.71 0.81 146

1 0.19 0.71 0.30 14

accuracy 0.71 160

macro avg 0.58 0.71 0.56 160

weighted avg 0.89 0.71 0.77 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.58 0.73 146

1 0.15 0.79 0.26 14

accuracy 0.60 160

macro avg 0.56 0.68 0.49 160

weighted avg 0.89 0.60 0.69 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.95 0.97 146

1 0.63 0.86 0.73 14

accuracy 0.94 160

macro avg 0.81 0.90 0.85 160

weighted avg 0.95 0.94 0.95 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 550 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.93 0.99 0.96 146

1 0.75 0.21 0.33 14

accuracy 0.93 160

macro avg 0.84 0.60 0.65 160

weighted avg 0.91 0.93 0.91 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.99 0.98 146

1 0.90 0.64 0.75 14

accuracy 0.96 160

macro avg 0.93 0.82 0.86 160

weighted avg 0.96 0.96 0.96 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.90 0.95 146

1 0.48 0.93 0.63 14

accuracy 0.91 160

macro avg 0.74 0.92 0.79 160

weighted avg 0.95 0.91 0.92 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.96 0.67 0.79 146

1 0.17 0.71 0.28 14

accuracy 0.68 160

macro avg 0.57 0.69 0.53 160

weighted avg 0.89 0.68 0.75 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.98 0.60 0.74 146

1 0.17 0.86 0.28 14

accuracy 0.62 160

macro avg 0.57 0.73 0.51 160

weighted avg 0.91 0.62 0.70 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.98 0.90 0.94 146

1 0.44 0.86 0.59 14

accuracy 0.89 160

macro avg 0.71 0.88 0.76 160

weighted avg 0.94 0.89 0.91 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 600 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.94 1.00 0.97 146

1 1.00 0.29 0.44 14

accuracy 0.94 160

macro avg 0.97 0.64 0.71 160

weighted avg 0.94 0.94 0.92 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.97 1.00 0.98 146

1 1.00 0.64 0.78 14

accuracy 0.97 160

macro avg 0.98 0.82 0.88 160

weighted avg 0.97 0.97 0.97 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.97 0.90 0.94 146

1 0.42 0.71 0.53 14

accuracy 0.89 160

macro avg 0.69 0.81 0.73 160

weighted avg 0.92 0.89 0.90 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.95 0.67 0.79 146

1 0.16 0.64 0.25 14

accuracy 0.67 160

macro avg 0.55 0.66 0.52 160

weighted avg 0.88 0.67 0.74 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.65 0.78 146

1 0.18 0.79 0.29 14

accuracy 0.66 160

macro avg 0.57 0.72 0.53 160

weighted avg 0.90 0.66 0.74 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.92 0.95 146

1 0.52 0.93 0.67 14

accuracy 0.92 160

macro avg 0.76 0.92 0.81 160

weighted avg 0.95 0.92 0.93 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 650 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.92 1.00 0.96 146

1 1.00 0.14 0.25 14

accuracy 0.93 160

macro avg 0.96 0.57 0.61 160

weighted avg 0.93 0.93 0.90 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.99 0.98 146

1 0.90 0.64 0.75 14

accuracy 0.96 160

macro avg 0.93 0.82 0.86 160

weighted avg 0.96 0.96 0.96 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.92 0.95 146

1 0.52 0.86 0.65 14

accuracy 0.92 160

macro avg 0.75 0.89 0.80 160

weighted avg 0.94 0.92 0.93 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.96 0.68 0.80 146

1 0.18 0.71 0.28 14

accuracy 0.68 160

macro avg 0.57 0.70 0.54 160

weighted avg 0.89 0.68 0.75 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.95 0.55 0.70 146

1 0.13 0.71 0.22 14

accuracy 0.57 160

macro avg 0.54 0.63 0.46 160

weighted avg 0.88 0.57 0.66 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.94 0.96 146

1 0.57 0.86 0.69 14

accuracy 0.93 160

macro avg 0.78 0.90 0.82 160

weighted avg 0.95 0.93 0.94 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 700 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.94 0.99 0.96 146

1 0.80 0.29 0.42 14

accuracy 0.93 160

macro avg 0.87 0.64 0.69 160

weighted avg 0.92 0.93 0.92 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.96 0.97 0.97 146

1 0.67 0.57 0.62 14

accuracy 0.94 160

macro avg 0.81 0.77 0.79 160

weighted avg 0.93 0.94 0.94 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.92 0.95 146

1 0.52 0.86 0.65 14

accuracy 0.92 160

macro avg 0.75 0.89 0.80 160

weighted avg 0.94 0.92 0.93 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.96 0.64 0.77 146

1 0.16 0.71 0.26 14

accuracy 0.65 160

macro avg 0.56 0.68 0.52 160

weighted avg 0.89 0.65 0.73 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.93 0.52 0.67 146

1 0.10 0.57 0.17 14

accuracy 0.53 160

macro avg 0.51 0.55 0.42 160

weighted avg 0.85 0.53 0.62 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.92 0.95 146

1 0.52 0.93 0.67 14

accuracy 0.92 160

macro avg 0.76 0.92 0.81 160

weighted avg 0.95 0.92 0.93 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 750 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.93 1.00 0.96 146

1 1.00 0.21 0.35 14

accuracy 0.93 160

macro avg 0.96 0.61 0.66 160

weighted avg 0.94 0.93 0.91 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.96 0.95 0.96 146

1 0.53 0.57 0.55 14

accuracy 0.92 160

macro avg 0.75 0.76 0.75 160

weighted avg 0.92 0.92 0.92 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.92 0.95 146

1 0.52 0.86 0.65 14

accuracy 0.92 160

macro avg 0.75 0.89 0.80 160

weighted avg 0.94 0.92 0.93 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.96 0.64 0.77 146

1 0.16 0.71 0.26 14

accuracy 0.65 160

macro avg 0.56 0.68 0.52 160

weighted avg 0.89 0.65 0.73 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.60 0.74 146

1 0.16 0.79 0.26 14

accuracy 0.61 160

macro avg 0.56 0.69 0.50 160

weighted avg 0.90 0.61 0.70 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.92 0.95 146

1 0.50 0.86 0.63 14

accuracy 0.91 160

macro avg 0.74 0.89 0.79 160

weighted avg 0.94 0.91 0.92 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 800 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.94 1.00 0.97 146

1 1.00 0.29 0.44 14

accuracy 0.94 160

macro avg 0.97 0.64 0.71 160

weighted avg 0.94 0.94 0.92 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.99 0.98 146

1 0.90 0.64 0.75 14

accuracy 0.96 160

macro avg 0.93 0.82 0.86 160

weighted avg 0.96 0.96 0.96 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.93 0.96 146

1 0.55 0.86 0.67 14

accuracy 0.93 160

macro avg 0.77 0.89 0.81 160

weighted avg 0.95 0.93 0.93 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.97 0.64 0.77 146

1 0.17 0.79 0.29 14

accuracy 0.66 160

macro avg 0.57 0.71 0.53 160

weighted avg 0.90 0.66 0.73 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.96 0.61 0.74 146

1 0.15 0.71 0.25 14

accuracy 0.62 160

macro avg 0.55 0.66 0.50 160

weighted avg 0.89 0.62 0.70 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.90 0.94 146

1 0.46 0.86 0.60 14

accuracy 0.90 160

macro avg 0.72 0.88 0.77 160

weighted avg 0.94 0.90 0.91 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 850 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.95 1.00 0.97 146

1 1.00 0.43 0.60 14

accuracy 0.95 160

macro avg 0.97 0.71 0.79 160

weighted avg 0.95 0.95 0.94 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.97 1.00 0.98 146

1 1.00 0.64 0.78 14

accuracy 0.97 160

macro avg 0.98 0.82 0.88 160

weighted avg 0.97 0.97 0.97 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.90 0.94 146

1 0.46 0.93 0.62 14

accuracy 0.90 160

macro avg 0.73 0.91 0.78 160

weighted avg 0.95 0.90 0.91 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.96 0.67 0.79 146

1 0.17 0.71 0.28 14

accuracy 0.68 160

macro avg 0.57 0.69 0.53 160

weighted avg 0.89 0.68 0.75 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.98 0.66 0.79 146

1 0.19 0.86 0.32 14

accuracy 0.68 160

macro avg 0.59 0.76 0.55 160

weighted avg 0.91 0.68 0.75 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.97 0.95 0.96 146

1 0.56 0.71 0.63 14

accuracy 0.93 160

macro avg 0.76 0.83 0.79 160

weighted avg 0.94 0.93 0.93 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 900 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.94 0.99 0.96 146

1 0.80 0.29 0.42 14

accuracy 0.93 160

macro avg 0.87 0.64 0.69 160

weighted avg 0.92 0.93 0.92 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.96 0.99 0.97 146

1 0.80 0.57 0.67 14

accuracy 0.95 160

macro avg 0.88 0.78 0.82 160

weighted avg 0.95 0.95 0.95 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.92 0.95 146

1 0.52 0.93 0.67 14

accuracy 0.92 160

macro avg 0.76 0.92 0.81 160

weighted avg 0.95 0.92 0.93 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.96 0.68 0.80 146

1 0.18 0.71 0.29 14

accuracy 0.69 160

macro avg 0.57 0.70 0.54 160

weighted avg 0.89 0.69 0.76 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.62 0.75 146

1 0.16 0.79 0.27 14

accuracy 0.63 160

macro avg 0.57 0.70 0.51 160

weighted avg 0.90 0.63 0.71 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.90 0.94 146

1 0.46 0.86 0.60 14

accuracy 0.90 160

macro avg 0.72 0.88 0.77 160

weighted avg 0.94 0.90 0.91 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 950 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.94 1.00 0.97 146

1 1.00 0.29 0.44 14

accuracy 0.94 160

macro avg 0.97 0.64 0.71 160

weighted avg 0.94 0.94 0.92 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.99 0.98 146

1 0.82 0.64 0.72 14

accuracy 0.96 160

macro avg 0.89 0.81 0.85 160

weighted avg 0.95 0.96 0.95 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.92 0.95 146

1 0.52 0.86 0.65 14

accuracy 0.92 160

macro avg 0.75 0.89 0.80 160

weighted avg 0.94 0.92 0.93 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.96 0.62 0.75 146

1 0.15 0.71 0.25 14

accuracy 0.62 160

macro avg 0.55 0.67 0.50 160

weighted avg 0.89 0.62 0.71 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.61 0.75 146

1 0.16 0.79 0.27 14

accuracy 0.62 160

macro avg 0.56 0.70 0.51 160

weighted avg 0.90 0.62 0.71 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.93 0.96 146

1 0.57 0.93 0.70 14

accuracy 0.93 160

macro avg 0.78 0.93 0.83 160

weighted avg 0.96 0.93 0.94 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 1000 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.94 0.99 0.96 146

1 0.80 0.29 0.42 14

accuracy 0.93 160

macro avg 0.87 0.64 0.69 160

weighted avg 0.92 0.93 0.92 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.95 0.96 146

1 0.56 0.64 0.60 14

accuracy 0.93 160

macro avg 0.76 0.80 0.78 160

weighted avg 0.93 0.93 0.93 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.98 0.90 0.94 146

1 0.44 0.79 0.56 14

accuracy 0.89 160

macro avg 0.71 0.84 0.75 160

weighted avg 0.93 0.89 0.91 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.97 0.62 0.76 146

1 0.17 0.79 0.27 14

accuracy 0.64 160

macro avg 0.57 0.70 0.52 160

weighted avg 0.90 0.64 0.72 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.59 0.73 146

1 0.15 0.79 0.26 14

accuracy 0.61 160

macro avg 0.56 0.69 0.50 160

weighted avg 0.90 0.61 0.69 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.91 0.95 146

1 0.48 0.86 0.62 14

accuracy 0.91 160

macro avg 0.73 0.88 0.78 160

weighted avg 0.94 0.91 0.92 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 1050 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.94 0.99 0.96 146

1 0.80 0.29 0.42 14

accuracy 0.93 160

macro avg 0.87 0.64 0.69 160

weighted avg 0.92 0.93 0.92 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.99 0.98 146

1 0.83 0.71 0.77 14

accuracy 0.96 160

macro avg 0.90 0.85 0.87 160

weighted avg 0.96 0.96 0.96 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.92 0.95 146

1 0.50 0.86 0.63 14

accuracy 0.91 160

macro avg 0.74 0.89 0.79 160

weighted avg 0.94 0.91 0.92 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.96 0.71 0.81 146

1 0.19 0.71 0.30 14

accuracy 0.71 160

macro avg 0.58 0.71 0.56 160

weighted avg 0.89 0.71 0.77 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.96 0.68 0.80 146

1 0.18 0.71 0.28 14

accuracy 0.68 160

macro avg 0.57 0.70 0.54 160

weighted avg 0.89 0.68 0.75 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.91 0.95 146

1 0.48 0.86 0.62 14

accuracy 0.91 160

macro avg 0.73 0.88 0.78 160

weighted avg 0.94 0.91 0.92 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 1100 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.95 1.00 0.98 146

1 1.00 0.50 0.67 14

accuracy 0.96 160

macro avg 0.98 0.75 0.82 160

weighted avg 0.96 0.96 0.95 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.96 1.00 0.98 146

1 1.00 0.57 0.73 14

accuracy 0.96 160

macro avg 0.98 0.79 0.85 160

weighted avg 0.96 0.96 0.96 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.92 0.95 146

1 0.50 0.86 0.63 14

accuracy 0.91 160

macro avg 0.74 0.89 0.79 160

weighted avg 0.94 0.91 0.92 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.96 0.67 0.79 146

1 0.17 0.71 0.28 14

accuracy 0.68 160

macro avg 0.57 0.69 0.53 160

weighted avg 0.89 0.68 0.75 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.61 0.75 146

1 0.16 0.79 0.27 14

accuracy 0.62 160

macro avg 0.56 0.70 0.51 160

weighted avg 0.90 0.62 0.71 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.93 0.96 146

1 0.55 0.86 0.67 14

accuracy 0.93 160

macro avg 0.77 0.89 0.81 160

weighted avg 0.95 0.93 0.93 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 1150 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.94 1.00 0.97 146

1 1.00 0.29 0.44 14

accuracy 0.94 160

macro avg 0.97 0.64 0.71 160

weighted avg 0.94 0.94 0.92 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.97 0.95 0.96 146

1 0.56 0.64 0.60 14

accuracy 0.93 160

macro avg 0.76 0.80 0.78 160

weighted avg 0.93 0.93 0.93 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.91 0.95 146

1 0.48 0.86 0.62 14

accuracy 0.91 160

macro avg 0.73 0.88 0.78 160

weighted avg 0.94 0.91 0.92 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.96 0.68 0.80 146

1 0.18 0.71 0.28 14

accuracy 0.68 160

macro avg 0.57 0.70 0.54 160

weighted avg 0.89 0.68 0.75 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.98 0.56 0.71 146

1 0.16 0.86 0.27 14

accuracy 0.59 160

macro avg 0.57 0.71 0.49 160

weighted avg 0.90 0.59 0.67 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.91 0.95 146

1 0.48 0.86 0.62 14

accuracy 0.91 160

macro avg 0.73 0.88 0.78 160

weighted avg 0.94 0.91 0.92 160

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Iterations : 1200 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Classifier+Smote + SVD AdaBoost2

precision recall f1-score support

0 0.92 0.99 0.96 146

1 0.67 0.14 0.24 14

accuracy 0.92 160

macro avg 0.80 0.57 0.60 160

weighted avg 0.90 0.92 0.89 160

Classifier +Smote + PCA AdaBoost2

precision recall f1-score support

0 0.96 0.99 0.97 146

1 0.80 0.57 0.67 14

accuracy 0.95 160

macro avg 0.88 0.78 0.82 160

weighted avg 0.95 0.95 0.95 160

Classifier + Chi+ SMOTE AdaBoost2

precision recall f1-score support

0 0.99 0.92 0.95 146

1 0.50 0.86 0.63 14

accuracy 0.91 160

macro avg 0.74 0.89 0.79 160

weighted avg 0.94 0.91 0.92 160

Classifier + SVD AdaBoost2

precision recall f1-score support

0 0.97 0.61 0.75 146

1 0.16 0.79 0.27 14

accuracy 0.62 160

macro avg 0.56 0.70 0.51 160

weighted avg 0.90 0.62 0.71 160

Classifier + PCA AdaBoost2

precision recall f1-score support

0 0.94 0.63 0.75 146

1 0.13 0.57 0.21 14

accuracy 0.62 160

macro avg 0.53 0.60 0.48 160

weighted avg 0.87 0.62 0.71 160

Classifier + Chi AdaBoost2

precision recall f1-score support

0 0.99 0.90 0.94 146

1 0.46 0.86 0.60 14

accuracy 0.90 160

macro avg 0.72 0.88 0.77 160

weighted avg 0.94 0.90 0.91 160