

## Assignment 4 – Report

### Sas151830

Tables of output:

Dataset1:

Method	Sam ple1	Sam ple2	Sam ple3	Sam ple4	Sam ple5	Sam ple6	Sam ple7	Sam ple8	Sam ple9	Sam ple1 0	Avg of 10 Samples	Best Paramete rs
Decision Tree	100	100	100	100	100	100	100	100	100	99.5	99.95	LTI, Loan, Age
SVM	98	99	98.5	97.5	97.5	98.5	100	99	98.5	97.5	98.4	LTI,Loan
Naïve Bayesian	97	96.5	96	95	95	98	98.5	96.5	96.5	95	96.4	LTI,Loan
KNN	84	86.5	85.5	84.5	82.5	87.5	81.5	87.5	86.5	82.5	84.85	LTI,Age
Logistic Regression	95	96.5	94.5	92.5	93.5	96	96	96.5	94	92	94.65	LTI,Loan, Age
Neural Network	89	85	87	85	83.5	88.5	85	85	86	86.5	86.05	LTI,Loan
Random Forest	100	100	100	100	100	100	100	100	100	99.5	99.95	LTI, Loan, Age
Bagging	100	100	100	100	100	100	100	100	100	99.5	99.95	LTI,Loan
Boosting	100	100	100	100	100	100	100	100	100	99.5	99.95	LTI,Age

Dataset 2:

Method	Sam ple1	Sam ple2	Sam ple3	Sam ple4	Sam ple5	Sam ple6	Sam ple7	Sam ple8	Sam ple9	Sam ple1 0	Avg of 10 Samples	Best Paramete rs
Decision Tree	62.5	65	55	62.5	67.5	65	62.5	65	77.5	67.5	65	GPA,GRE, Rank
SVM	75	62.5	62.5	72.5	65	62.5	62.5	62.5	80	70	67.5	GPA,GRE, Rank
Naïve Bayesian	75	57.5	65	75	65	57.5	67.5	62.5	80	65	67	GPA,GRE, Rank
KNN	92.5	65	62.5	75	60	65	65	65	67.5	60	67.75	Gpa,Rank ,Gre
Logistic Regressi on	72.5	60	62.5	72.5	55	60	65	67.5	77.5	60	65.25	GPA,GRE, Rank
Neural Network	30	55	72.5	70	45	55	62.5	55	62.5	40	54.75	Gpa,Rank ,Gre
Random Forest	65	62.5	57.5	67.5	65	62.5	65	67.5	77.5	65	65.5	GPA,GRE, Rank
Bagging	55	60	57.5	67.5	57.5	60	72.5	62.5	77.5	70	64	GPA,GRE, Rank
Boosting	67.5	67.5	62.5	72.5	60	67.5	67.5	52.5	67.5	57.5	64.25	Gpa,Rank ,Gre

Dataset 3:

Meth od	Sam ple1	Sam ple2	Sam ple3	Sam ple4	Sam ple5	Sam ple6	Sam ple7	Sam ple8	Sam ple9	Samp le10	Avg of 10 Sam ples	Best Parameter s
Decisi on Tree	80	85	40	80	75	75	75	90	80	80	76	V35,V1,V3, V32,V15
SVM	75	80	65	80	75	75	70	90	90	80	78	V35,V1,V3, V24,V26
Naïve Bayes ian	75	75	65	65	65	65	65	75	70	65	68.5	V3,V35,V1, V15,V22
KNN	75	80	65	80	80	70	70	85	80	80	76.5	V35,V1,V3, V32,V15
Logist ic Regre ssion	80	75	70	70	65	85	75	70	85	70	74.5	V3,V35,V1, V15,V28
Neura l Netw ork	80	70	75	65	80	80	75	70	80	65	74	V3,V35,V1, V31,V10
Rand om Fores t	75	80	65	80	85	75	75	90	95	80	80	V35,V1,V3, V24,V26
Baggi ng	60	80	70	85	70	80	65	75	85	85	75.5	V3,V1,V35, V34,V32
Boost ing	80	75	55	80	60	85	75	80	85	80	75.5	V1,V35,V3, V15,V22

Dataset 4:

Meth od	Sam ple1	Sam ple2	Sam ple3	Sam ple4	Sam ple5	Sam ple6	Sam ple7	Sam ple8	Sam ple9	Sam ple1 0	Avg of 10 Sampl es	Best Parameter s
Decis ion Tree	91.2 2	91.2 2	96.4 9	94.7 3	87.7 193	91.2 2807	91.2 2807	84.2 1053	92.9 8246	91.2 2807	91.225 64913	V26,V23,V 25,V6,V3
SVM	94.7 4	98.2 4	98.2 4	98.2 4	96.4 9123	94.7 3684	98.2 4561	92.9 8246	96.4 9123	98.2 4561	96.665 29825	V25,V26,V 23,V5,V3
Naïve Bayes ian	96.4 9	96.4 9	94.7 3	91.2 2	85.9 6491	92.9 8246	92.9 8246	89.4 7368	92.9 8246	94.7 3684	92.805 2807	V25,V26,V 23,V5,V3
KNN	73.1 5	80.7	73.6 8	78.9 4	68.4 2105	86.6 6667	77.1 9298	80.1 7544	77.1 9298	71.4 0351	76.752 26316	V25,V26,V 23,V5,V3
Logis tic Regre ssion	96.4 9	98.2 5	96.4 9	98.2 5	87.7 193	91.2 2807	92.9 8246	89.4 7368	92.9 8246	96.4 9123	94.035 7193	V30,V25,V 23,V10,V9
Neur al Netw ork	64.9 123	87.8 947	68.4 211	64.9 123	79.6 491	70.8 772	80.8 772	86.1 404	89.6 491	88.4 211	78.175 4386	V25,V23,V 26,V5,V6
Rand om Fores t	94.7 3	98.2 5	98.2 5	94.7 4	96.4 9123	96.4 9123	96.4 9123	87.7 193	94.7 3684	96.4 9123	95.439 10526	V26,V23,V 25,V6,V3
Baggi ng	94.7 3	94.7 3	98.2 5	96.4 9	96.4 9123	92.9 8246	92.9 8246	92.9 8246	94.7 3684	92.9 8246	94.735 78947	V26,V23,V 25,V6,V3
Boost ing	94.7 3	94.7 3	98.2 5	98.2 4	94.7 3684	98.2 4561	98.2 4561	92.9 8246	94.7 3684	96.4 9123	96.138 85965	V23,V26,V 25,V6,V3

Dataset 5:

Meth od	Sam ple1	Sam ple2	Sam ple3	Sam ple4	Sam ple5	Sam ple6	Sam ple7	Sam ple8	Sam ple9	Sam ple1 0	Avg of 10 Sampl es	Best Paramet ers
Decis ion Tree	83.3 3333	83.3 3333	91.6 6667	88.8 8889	88.8 8889	91.6 6667	88.8 8889	91.6 6667	80.5 5556	80.5 5556	86.944 44445	V5,V27,V 7,V3,V13
SVM	88.8 8889	91.6 6667	97.2 2222	88.8 8889	86.1 1111	94.4 4444	94.4 4444	97.2 2222	86.1 1111	88.8 8889	91.388 88889	V5,V27,V 7,V3,V23
Naïve Bayes ian	88.8 8889	86.1 1111	97.2 2222	88.8 8889	86.1 1111	91.6 6667	91.6 6667	91.6 6667	88.8 8889	86.1 1111	89.722 22222	V5,V27,V 7,V3,V1
KNN	75	83.3 3333	83.3 3333	75	83.3 3333	83.3 3333	86.1 1111	91.6 6667	83.3 3333	83.3 3333	82.777 77778	V5,V27,V 7,V3,V29
Logis tic Regre ssion	88.8 8889	88.8 8889	80.5 5556	86.1 1111	97.2 2222	83.3 3333	86.1 1111	86.1 1111	91.6 6667	77.7 7778	86.666 66667	V5,V27,V 6,V6,V33
Neur al Netw ork	88.8 889	83.3 333	77.7 778	86.1 111	86.1 1111	88.8 8889	88.8 889	94.4 445	94.4 445	91.6 667	88.055 57	V5,V27,V 7,V1,V4
Rand om Fores t	88.8 8889	94.4 4444	94.4 4444	88.8 8889	91.6 6667	100	97.2 2222	91.6 6667	91.6 6667	88.8 8889	92.777 77778	V5,V27,V 7,V23,V4
Baggi ng	91.6 6667	94.4 4444	97.2 2222	88.8 8889	94.4 4444	100	94.4 4444	88.8 8889	91.6 6667	86.1 1111	92.777 77778	V5,V27,V 7,V4,V23
Boost ing	88.8 8889	94.4 4444	91.6 6667	88.8 8889	94.4 4444	100	94.4 4444	86.1 1111	83.3 3333	88.8 8889	91.111 11111	V5,V27,V 7,V1,V23