Deep Learning

ResNet152

Magnification	Precision		Recall		F1	
	B	M	B	M	B	M
40X	0.95	0.87	0.71	0.98	0.81	0.92
100X	0.81	0.87	0.74	0.91	0.77	0.89
200X	0.84	0.91	0.83	0.92	0.83	0.91
400X	0.76	0.91	0.86	0.85	0.81	0.88

Xception + LSTM

Magnification	Precision		Recall		F1	
	B	M	B	M	B	M
40X	0.88	0.94	0.89	0.94	0.88	0.94
100X	0.97	0.9	0.79	0.99	0.87	0.94
200X	0.91	0.88	0.75	0.96	0.82	0.92
400X	0.86	0.9	0.81	0.93	0.83	0.91

TRANSFER LEARNING

VGG

Technique	40X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.68	0.81	0.63	0.84	0.65	0.83
SGD	0.69	0.83	0.67	0.84	0.68	0.84
Naiv Bayes	0.57	0.81	0.66	0.74	0.61	0.77
Decision Tree	0.58	0.8	0.64	0.75	0.61	0.78
Adaboost	0.65	0.86	0.75	0.79	0.7	0.82
Gradient Boostir	0.64	0.84	0.72	0.79	0.68	0.82
Random Forest	0.66	0.9	0.83	0.78	0.74	0.84
Extremely Trees	0.58	0.9	0.83	0.8	0.75	0.85
Linear SVM	0.67	0.88	0.78	0.8	0.72	0.84
SVM	0.73	0.9	0.82	0.84	0.77	0.87

Technique	100X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.63	0.78	0.54	0.84	0.58	0.81
SGD	0.76	0.8	0.57	0.91	0.65	85
Naiv Bayes	0.54	0.81	0.67	0.7	0.6	0.75
Decision Tree	0.55	0.79	0.63	0.73	0.59	0.76
Adaboost	0.65	0.84	0.71	0.8	0.68	0.82
Gradient Boos	0.66	0.84	0.71	0.81	0.69	0.83
Random Fores	0.67	0.85	0.73	0.82	0.7	0.83
Extremely Tre	0.68	0.85	0.72	0.82	0.7	0.83
Linear SVM	0.73	0.87	0.75	0.85	0.74	0.86
SVM	0.7	0.85	0.71	0.84	0.7	0.84

Technique	200X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.65	0.8	0.62	0.83	0.63	0.82
SGD	0.85	0.77	0.45	0.96	0.59	0.85
Naiv Bayes	0.68	0.84	0.69	0.83	0.69	0.83
Decision Tree	0.5	0.77	0.61	0.69	0.55	0.73
Adaboost	0.69	0.85	0.72	0.83	0.7	0.84
Gradient Boostir	0.7	0.86	0.75	0.83	0.72	0.85
Random Forest	0.8	0.88	0.76	0.9	0.78	0.89
Extremely Trees	0.81	0.88	0.77	0.91	0.79	0.9
Linear SVM	0.71	0.88	0.79	0.83	0.75	0.86
SVM	0.87	0.83	0.64	0.95	0.74	0.89

Technique	400X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.61	0.84	0.75	0.73	0.67	0.78
SGD	0.69	0.81	0.66	0.83	0.68	0.82
Naiv Bayes	0.54	0.89	0.87	0.57	0.66	0.7
Decision Tree	0.57	0.78	0.63	0.73	0.6	0.75
Adaboost	0.66	0.85	0.75	0.78	0.7	0.81
Gradient Boos	0.67	0.84	0.74	0.79	0.7	0.82
Random Fores	0.71	0.88	0.8	0.82	0.76	0.85
Extremely Tre	0.71	0.88	0.8	0.82	0.75	0.85
Linear SVM	0.68	0.83	0.7	0.81	0.69	0.82
SVM	0.81	0.81	0.62	0.92	0.7	0.86

RESNET152

Technique	40X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.54	0.8	0.67	0.71	0.6	0.75
SGD	0.5	0.83	0.76	0.61	0.6	370
Naiv Bayes	0.46	0.8	0.75	0.54	0.57	0.64
Decision Tree	0.42	0.72	0.55	0.61	0.48	0.66
Adaboost	0.53	0.7	0.58	0.74	0.55	0.75
Gradient Boostir	0.55	0.8	0.64	0.72	0.59	0.76
Random Forest	0.55	0.81	0.68	0.71	0.61	0.76
Extremely Trees	0.54	0.8	0.66	0.7	0.59	0.75
Linear SVM	0.62	0.83	0.7	0.78	0.66	0.8
SVM	0	0.66	0	1	0	0.79

Technique	100X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.53	0.78	0.6	0.73	0.57	0.75
SGD	0.54	0.83	0.75	0.67	0.63	0.74
Naiv Bayes	0.47	0.78	0.67	0.61	0.55	0.68
Decision Tree	0.49	0.75	0.57	0.69	0.53	0.72
Adaboost	0.58	0.79	0.62	0.76	0.6	0.78
Gradient Boos	0.57	0.79	0.63	0.75	0.6	0.77
Random Fores	0.6	0.81	0.65	0.77	0.62	0.79
Extremely Tre	0.6	0.81	0.64	0.77	0.62	0.79
Linear SVM	0.61	0.8	0.63	0.79	0.62	0.8
SVM	0.52	0.8	0.69	0.67	0.59	0.73

Technique	200X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.55	0.81	0.67	0.72	0.61	0.76
SGD	0.52	0.87	0.84	0.59	0.64	0.7
Naiv Bayes	0.51	0.81	0.71	0.64	0.59	0.72
Decision Tree	0.53	0.76	0.55	0.74	0.54	0.75
Adaboost	0.61	0.83	0.69	0.77	0.65	0.8
Gradient Boostir	0.6	0.81	0.66	0.77	0.63	0.79
Random Forest	0.62	0.83	0.69	0.78	0.65	0.8
Extremely Trees	0.61	0.84	0.73	0.76	0.66	0.8
Linear SVM	0.65	0.84	0.72	0.8	0.68	0.82
SVM	0	0.66	0	1	0	0.79

Technique	400X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.52	0.76	0.62	0.67	0.52	0.71
SGD	0.48	0.84	0.84	0.48	0.61	0.61
Naiv Bayes	0.49	0.79	0.73	0.57	0.59	0.66
Decision Tree	0.51	0.75	0.59	0.68	0.55	0.71
Adaboost	0.56	0.77	0.63	0.72	0.59	0.75
Gradient Boos	0.56	0.77	0.61	0.72	0.58	0.74
Random Fores	0.57	0.78	0.63	0.73	0.6	0.76
Extremely Tre	0.56	0.78	0.63	0.72	0.59	0.75
Linear SVM	0.58	0.76	0.58	0.76	0.58	0.76
SVM	0.54	0.74	0.53	0.75	0.54	0.74

IV3

Technique	40X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.33	0.65	0.43	0.54	0.37	0.59
SGD	0.31	0.64	0.34	0.6	0.32	0.62
Naiv Bayes	0.25	0.63	0.18	0.72	0.21	0.67
Decision Tree	0.36	0.67	0.4	0.62	0.38	0.64
Adaboost	0.31	0.63	0.37	0.56	0.33	0.6
Gradient Boostir	0.31	0.64	0.35	0.59	0.33	0.61
Random Forest	0.37	0.67	0.4	0.64	0.38	0.66
Extremely Trees	0.36	0.67	0.4	0.63	0.38	0.65
Linear SVM	0	0.66	0	1	0	0.79
SVM	0	0.66	0	1	0	0.79

Technique	100X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.37	0.67	0.41	0.63	0.39	0.65
SGD	0.36	0.87	0.97	0.09	0.53	0.17
Naiv Bayes	0.31	0.65	0.19	0.79	0.24	0.71
Decision Tree	0.4	0.69	0.46	0.65	0.43	0.67
Adaboost	0.4	0.68	0.38	0.71	0.39	0.69
Gradient Boos	0.4	0.69	0.4	0.69	0.4	0.69
Random Fores	0.39	0.68	0.41	0.67	0.4	67
Extremely Tre	0.39	0.69	0.44	0.64	0.41	0.66
Linear SVM	0	0.66	0	1	0	0.79
SVM	0	0.66	0	1	0	0.79

Technique	200X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.36	0.67	0.51	0.52	0.42	0.59
SGD	0.49	0.7	0.33	0.82	0.4	0.76
Naiv Bayes	0.36	0.67	0.44	0.59	0.4	0.63
Decision Tree	0.37	0.68	0.54	0.52	0.44	0.59
Adaboost	0.4	0.7	0.53	0.58	0.45	0.64
Gradient Boostir	0.38	0.68	0.46	0.6	0.41	0.64
Random Forest	0.37	0.68	0.49	0.56	0.42	0.61
Extremely Trees	0.37	0.68	0.51	0.54	0.43	0.6
Linear SVM	0	0.66	0	1	0	0.79
SVM	0	0.66	0	1	0	0.79

Technique	400X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.33	0.62	0.39	0.56	0.36	0.59
SGD	0.21	0.6	0.11	0.77	0.15	0.68
Naiv Bayes	0.36	0.63	0.69	0.3	0.47	0.41
Decision Tree	0.34	0.63	0.32	0.65	0.33	0.64
Adaboost	0.29	0.6	0.3	0.59	0.29	0.59
Gradient Boos	0.35	0.63	0.34	0.63	0.34	0.63
Random Fores	0.36	0.64	0.3	0.69	0.33	0.66
Extremely Tre	0.39	0.65	0.36	0.67	0.37	0.66
Linear SVM	0	0.64	0	1	0	0.78
SVM	0	0.64	0	1	0	0.78

VGG19 + RESNET152

Technique	40X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.68	0.82	0.64	0.84	0.66	0.83
SGD	0.69	0.82	0.64	0.85	0.67	0.84
Naiv Bayes	0.5	0.82	0.74	0.61	0.6	0.7
Decision Tree	0.54	0.8	0.65	0.71	0.59	0.75
Adaboost	0.64	0.84	0.71	0.79	0.67	0.81
Gradient Boostir	0.64	0.84	0.71	0.79	0.67	0.82
Random Forest	0.67	0.86	0.75	0.81	0.71	0.84
Extremely Trees	0.67	0.86	0.75	0.81	0.71	0.84
Linear SVM	0.67	0.88	0.78	0.8	0.72	0.84
SVM	0.77	0.89	0.79	0.88	0.78	0.88

Technique	100X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.63	0.78	0.54	0.84	0.58	0.81
SGD	0.7	0.82	0.65	0.85	0.67	0.84
Naiv Bayes	0.5	0.8	0.69	0.64	0.58	0.71
Decision Tree	0.57	0.79	0.62	0.76	0.59	0.77
Adaboost	0.7	0.85	0.7	0.83	0.71	0.84
Gradient Boos	0.67	0.86	0.74	0.81	0.7	0.83
Random Fores	0.7	0.87	0.77	0.83	0.73	0.85
Extremely Tre	0.7	0.86	0.75	0.83	0.72	0.85
Linear SVM	0.71	0.87	0.76	0.84	0.73	0.85
SVM	0.74	0.85	0.7	0.87	0.72	0.86

Technique	200X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.65	0.8	0.62	0.83	0.63	0.82
SGD	0.57	0.91	0.87	0.66	0.69	0.77
Naiv Bayes	0.65	0.86	0.75	0.79	0.69	0.82
Decision Tree	0.59	0.83	0.71	0.74	0.64	0.78
Adaboost	0.72	0.87	0.77	0.84	0.74	0.86
Gradient Boostir	0.72	0.89	0.8	0.84	0.76	0.86
Random Forest	0.75	0.89	0.8	0.86	0.78	0.88
Extremely Trees	0.75	0.89	0.79	0.86	0.77	0.87
Linear SVM	0.71	0.88	0.79	0.83	0.75	0.86
SVM	0.86	0.86	0.72	0.94	0.78	0.9

Technique	400X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.61	0.84	0.75	0.73	0.67	0.78
SGD	0.59	0.82	0.72	0.72	0.65	0.76
Naiv Bayes	0.55	0.85	0.81	0.63	0.66	0.73
Decision Tree	0.58	0.78	0.64	0.73	0.61	0.76
Adaboost	0.7	0.85	0.74	0.82	0.72	0.83
Gradient Boos	0.7	0.84	0.73	0.82	0.71	0.83
Random Fores	0.68	0.83	0.71	0.81	0.69	0.82
Extremely Tre	0.65	0.83	0.71	0.78	0.68	0.8
Linear SVM	0.68	0.83	0.7	0.81	0.69	0.82
SVM	0.79	0.85	0.73	0.89	0.76	0.87

VGG19 + RESNET152 + IV3

Technique	40X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.68	0.82	0.64	0.84	0.66	0.83
SGD	0.52	0.88	0.85	0.59	0.64	0.71
Naiv Bayes	0.49	0.8	0.69	0.62	0.57	0.7
Decision Tree	0.55	0.8	0.65	0.72	0.59	0.76
Adaboost	0.62	0.83	0.69	0.78	0.65	0.8
Gradient Boostir	0.65	0.83	0.67	0.81	0.66	0.82
Random Forest	0.64	0.85	0.74	0.78	0.69	0.82
Extremely Trees	0.64	0.85	0.73	0.79	0.68	0.82
Linear SVM	0.67	0.88	0.78	0.8	0.72	0.84
SVM	0.77	0.89	0.78	0.88	0.78	0.88

Technique	100X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.63	0.78	0.54	0.84	0.58	0.81
SGD	0.76	0.84	0.68	0.89	0.72	0.86
Naiv Bayes	0.5	0.79	0.67	0.65	0.57	0.71
Decision Tree	0.53	0.78	0.62	0.71	0.57	0.74
Adaboost	0.71	0.86	0.74	0.85	0.73	0.85
Gradient Boos	0.7	0.86	0.74	0.84	0.72	0.85
Random Fores	0.69	0.87	0.77	0.82	0.72	0.85
Extremely Tre	0.69	0.87	0.77	0.82	0.73	0.85
Linear SVM	0.68	0.85	0.72	0.82	0.7	0.84
SVM	0.71	0.87	0.76	0.84	0.73	0.85

Technique	200X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.65	0.8	0.62	0.83	0.63	0.82
SGD	0.56	0.89	0.84	0.66	0.67	0.76
Naiv Bayes	0.63	0.85	0.75	0.77	0.68	0.81
Decision Tree	0.59	0.83	0.71	0.75	0.65	0.79
Adaboost	0.69	0.87	0.77	0.82	0.73	0.85
Gradient Boostir	0.75	0.89	0.79	0.86	0.77	0.87
Random Forest	0.73	0.9	0.82	0.84	0.77	0.87
Extremely Trees	0.72	0.9	0.82	0.83	0.77	0.87

Technique	400X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.61	0.84	0.75	0.73	0.67	0.78
SGD	0.77	0.75	0.47	0.92	0.58	0.83
Naiv Bayes	0.53	0.8	0.73	0.63	0.61	0.71
Decision Tree	0.56	0.79	0.68	0.7	0.61	0.74
Adaboost	0.69	0.84	0.3	0.81	0.7	0.82
Gradient Boos	0.68	0.83	0.7	0.81	0.69	0.82
Random Fores	0.66	0.83	0.72	0.79	0.69	0.81
Extremely Tre	0.65	0.83	0.73	0.78	0.69	0.8

Linear SVM	0.71	0.88	0.78	0.84	0.75	0.86
SVM	0.85	0.88	0.75	0.3	0.8	0.9

Linear SVM	0.68	0.83	0.7	0.81	0.69	0.82
SVM	0.78	0.85	0.73	0.88	0.76	0.87

FINE TUNNING

VGG

Technique	40X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.64	0.82	0.67	0.8	0.65	0.81
SGD	0.76	0.76	0.43	0.93	0.55	0.84
Naiv Bayes	0.79	0.76	0.44	0.94	0.57	0.84
Decision Tree	0.55	0.8	0.65	0.72	0.6	0.76
Adaboost	0.61	0.81	0.65	0.78	0.63	0.8
Gradient Boostir	0.61	0.82	0.67	0.78	0.64	0.8
Random Forest	0.65	0.85	0.72	0.79	0.68	0.82
Extremely Trees	0.65	0.86	0.75	0.79	0.69	0.82
Linear SVM	0.64	0.81	0.64	0.81	0.64	0.81
SVM	0	0.66	0	1	0	0.79

Technique	100X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.55	0.79	0.63	0.73	0.59	0.76
SGD	0.52	0.84	0.77	0.62	0.62	0.71
Naiv Bayes	0.51	0.88	0.86	0.57	0.64	0.69
Decision Tree	0.54	0.82	0.72	0.68	0.62	0.74
Adaboost	0.58	0.84	0.75	0.72	0.65	0.77
Gradient Boos	0.56	0.8	0.66	0.73	0.6	0.77
Random Fores	0.6	0.86	0.77	0.73	0.68	0.79
Extremely Tre	0.61	0.87	0.78	0.74	0.69	0.8
Linear SVM	0.52	0.82	0.7	0.7	0.62	0.75
SVM	0	0.66	0	1	0	0.79

Technique	200X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.58	0.73	0.41	0.85	0.48	0.79
SGD	0.73	0.75	0.41	0.92	0.53	0.83
Naiv Bayes	0.61	0.67	0.09	0.97	0.16	0.79
Decision Tree	0.52	0.76	0.55	0.74	0.54	0.75
Adaboost	0.6	0.78	0.58	0.8	0.59	0.79
Gradient Boostir	0.61	0.78	0.56	0.81	0.59	0.8
Random Forest	0.7	0.79	0.55	0.88	0.61	0.83
Extremely Trees	0.69	0.78	0.54	0.87	0.61	0.83
Linear SVM	0.65	0.81	0.63	0.83	0.64	0.82
SVM	0	0.66	0	1	0	0.79

Technique	400X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.52	0.78	0.68	0.65	0.59	0.71
SGD	0.57	0.78	0.64	0.73	0.61	0.75
Naiv Bayes	0.62	0.67	0.2	0.93	0.3	0.78
Decision Tree	0.49	0.74	0.6	0.64	0.54	0.69
Adaboost	0.57	0.78	0.65	0.72	0.61	0.75
Gradient Boos	0.58	0.79	0.66	0.73	0.62	0.76
Random Fores	0.63	0.81	0.68	0.78	0.65	0.79
Extremely Tre	0.61	0.79	0.64	0.77	0.62	0.78
Linear SVM	0.59	0.81	0.7	0.73	0.64	0.77
SVM	0.59	0.82	0.73	0.72	0.66	0.77

RESNET152

Technique	40X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.45	0.72	0.5	0.68	0.47	0.7
SGD	0.72	0.67	0.05	0.99	0.1	0.8
Naiv Bayes	0.4	0.7	0.51	0.6	0.45	0.65
Decision Tree	0.41	0.7	0.55	0.59	0.47	0.65
Adaboost	0.48	0.74	0.54	0.69	0.51	0.72
Gradient Boostir	0.47	0.74	0.53	0.69	0.5	0.72
Random Forest	0.5	0.74	0.5	0.74	0.5	0.74
Extremely Trees	0.5	0.74	0.49	0.74	0.49	0.74
Linear SVM	0.49	0.74	0.53	0.71	0.51	0.73
SVM	0	0.66	0	1	0	0.79

Technique	100X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.47	0.74	0.52	0.69	0.5	0.71
SGD	0.67	0.66	0.02	1	0.03	0.79
Naiv Bayes	0.33	0.66	0.18	0.84	0.25	0.74
Decision Tree	0.48	0.76	0.6	0.67	0.54	0.71
Adaboost	0.55	0.82	0.71	0.7	0.62	0.75
Gradient Boos	0.57	0.84	0.74	0.71	0.64	0.77
Random Fores	0.59	0.83	0.71	0.74	0.65	0.79
Extremely Tre	0.57	0.81	0.66	0.74	0.61	0.77
Linear SVM	0.66	0.86	0.75	0.8	0.7	0.83
SVM	0	0.66	0	1	0	0.79

Technique	200X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.66	0.84	0.7	0.81	0.68	0.82
SGD	0.48	0.89	0.89	0.5	0.62	0.64
Naiv Bayes	0.72	0.72	0.28	0.94	0.41	0.81
Decision Tree	0.52	0.78	0.63	0.7	0.57	0.74
Adaboost	0.58	0.85	0.75	0.71	0.65	0.77
Gradient Boostir	0.6	0.85	0.75	0.74	0.67	0.79
Random Forest	0.66	0.91	0.85	0.78	0.74	0.84
Extremely Trees	0.68	0.91	0.85	0.79	0.76	0.85
Linear SVM	0.7	0.88	0.78	0.83	0.74	0.85
SVM	0.74	0.86	0.73	0.87	0.73	0.83

Technique	400X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.46	0.71	0.53	0.65	0.49	0.68
SGD	0.1	0.64	0	1	0.01	0.78
Naiv Bayes	0.48	0.65	0.16	0.9	0.24	0.76
Decision Tree	0.46	0.72	0.55	0.64	0.5	0.67
Adaboost	0.51	0.75	0.62	0.66	0.56	0.7
Gradient Boos	0.49	0.75	0.63	0.62	0.55	0.68
Random Fores	0.54	0.76	0.59	0.72	0.56	0.73
Extremely Tre	0.56	0.78	0.63	0.72	0.6	0.75
Linear SVM	0.59	0.8	0.69	0.73	0.63	0.76
SVM	0.54	0.73	0.51	0.75	0.53	0.74

IV3

Technique	40X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.33	0.65	0.41	0.57	0.37	0.61
SGD	0.14	0.65	0.01	0.96	0.02	0.78
Naiv Bayes	0.29	0.61	0.38	0.51	0.33	0.56
Decision Tree	0.32	0.64	0.43	0.53	0.37	0.58
Adaboost	0.31	0.63	0.39	0.54	0.35	0.58
Gradient Boostir	0.31	0.64	0.37	0.58	0.34	0.61
Random Forest	0.34	0.66	0.37	0.62	0.35	0.64
Extremely Trees	0.35	0.66	0.38	0.63	0.37	0.65
Linear SVM	0.29	0.61	0.37	0.52	0.32	0.56
SVM	0	0.66	0	1	0	0.79

Technique	100X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.37	0.67	0.41	0.63	0.39	0.65
SGD	0.32	0.59	0.73	0.2	0.45	0.3
Naiv Bayes	0.33	0.65	0.2	0.9	0.25	0.71
Decision Tree	0.36	0.67	0.43	0.6	0.39	0.63
Adaboost	0.32	0.65	0.32	0.65	0.32	0.65
Gradient Boos	0.33	0.65	0.36	0.62	0.35	0.64
Random Fores	0.34	0.65	0.36	0.63	0.35	0.64
Extremely Tre	0.32	0.65	0.34	0.63	0.33	0.64
Linear SVM	0.31	0.64	0.31	0.63	0.31	0.63
SVM	0	0.66	0	1	0	0.79

Technique	200X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.36	0.67	0.44	0.59	0.4	0.63
SGD	0.42	0.66	0.05	0.96	0.09	0.78
Naiv Bayes	0.26	0.59	0.33	0.51	0.29	0.55
Decision Tree	0.39	0.7	0.52	0.58	0.44	0.63
Adaboost	0.39	0.69	0.46	0.62	0.42	0.65
Gradient Boostir	0.38	0.69	0.49	0.58	0.43	0.63
Random Forest	0.4	0.7	0.46	0.65	0.43	0.67
Extremely Trees	0.38	0.68	0.39	0.66	0.39	0.67
Linear SVM	0.35	0.67	0.44	0.58	0.39	0.62
SVM	0	0.66	0	1	0	0.79

Technique	400X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.38	0.66	0.51	0.53	0.44	0.59
SGD	0.36	0.64	0.65	0.36	0.47	0.46
Naiv Bayes	0.35	0.58	0.85	0.12	0.5	0.2
Decision Tree	0.41	0.68	0.53	0.57	0.46	0.62
Adaboost	0.39	0.67	0.58	0.48	0.47	0.56
Gradient Boos	0.39	0.67	0.55	0.51	0.46	0.58
Random Fores	0.39	0.66	0.49	0.57	0.44	0.61
Extremely Tre	0.37	0.65	0.45	0.57	0.41	0.61
Linear SVM	0.39	0.67	0.55	0.51	0.46	0.58
SVM	0	0.64	0	1	0	0.78

VGG19 + RESNET152

Technique	40X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.62	0.82	0.67	0.79	0.65	0.81
SGD	0.71	0.77	0.48	0.9	0.57	0.83
Naiv Bayes	0.76	0.76	0.44	0.93	0.56	0.84
Decision Tree	0.59	0.79	0.61	0.78	0.6	0.79
Adaboost	0.66	0.82	0.65	0.82	0.65	0.82
Gradient Boostir	0.66	0.81	0.64	0.83	0.65	0.82
Random Forest	0.7	0.85	0.71	0.84	0.71	0.85
Extremely Trees	0.7	0.85	0.71	0.84	0.71	0.85
Linear SVM	0.67	0.81	0.62	0.84	0.65	0.83
SVM	0	0.66	0	1	0	0.79

Technique	100X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.63	0.83	0.7	0.78	0.66	0.81
SGD	0.38	0.96	0.99	0.15	0.55	0.26
Naiv Bayes	0.52	0.88	0.85	0.6	0.65	0.71
Decision Tree	0.55	0.81	0.67	0.72	0.61	0.76
Adaboost	0.59	0.82	0.69	0.75	0.64	0.79
Gradient Boos	0.59	0.8	0.64	0.77	0.62	0.79
Random Fores	0.66	0.87	0.77	0.79	0.71	0.83
Extremely Tre	0.65	0.87	0.78	0.79	0.71	0.83
Linear SVM	0.65	0.84	0.71	0.8	0.68	0.82
SVM	0	0.66	0	1	0	0.79

Technique	200X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.69	0.83	0.65	0.85	0.67	0.84
SGD	0.82	0.76	0.43	0.95	0.56	0.85
Naiv Bayes	0.71	0.7	0.22	0.95	0.34	0.81
Decision Tree	0.6	0.81	0.65	0.77	0.63	0.79
Adaboost	0.69	0.85	0.72	0.83	0.7	0.84
Gradient Boostir	0.71	0.85	0.7	0.85	0.7	0.85
Random Forest	0.74	0.84	0.69	0.88	0.71	0.86
Extremely Trees	0.75	0.84	0.69	0.88	0.72	0.86
Linear SVM	0.71	0.83	0.66	0.86	0.69	0.84
SVM	0	0.66	0	1	0	0.79

Technique	400X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.49	0.74	0.58	0.66	0.53	0.7
SGD	0.72	0.78	0.55	0.88	0.63	0.82
Naiv Bayes	0.63	0.68	0.24	0.92	0.34	0.78
Decision Tree	0.55	0.77	0.63	0.71	0.59	0.74
Adaboost	0.61	0.8	0.67	0.76	0.64	0.78
Gradient Boos	0.62	0.72	0.71	0.76	0.66	0.79
Random Fores	0.63	0.81	0.68	0.78	0.65	0.79
Extremely Tre	0.63	0.8	0.65	0.78	0.64	0.79
Linear SVM	0.62	0.84	0.76	0.74	0.69	0.79
SVM	0.6	0.8	0.68	0.75	0.64	0.77

VGG19 + RESNET152 + IV3

Technique	40X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.59	0.78	0.57	0.79	0.58	0.78
SGD	0.56	0.83	0.73	0.7	0.63	0.76
Naiv Bayes	0.77	0.76	0.44	0.93	0.56	0.84
Decision Tree	0.56	0.78	0.6	0.75	0.58	0.77
Adaboost	0.67	0.82	0.66	0.83	0.66	0.83
Gradient Boostir	0.64	0.82	0.67	0.81	0.66	0.82
Random Forest	0.69	0.83	0.67	0.84	0.68	0.84
Extremely Trees	0.69	0.84	0.7	0.83	0.69	0.84
Linear SVM	0.64	0.81	0.62	0.81	0.63	0.81
SVM	0	0.66	0	1	0	0.79

Technique	100X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.45	0.71	0.42	0.73	0.43	0.72
SGD	0.56	0.86	0.79	0.67	0.65	0.76
Naiv Bayes	0.53	0.89	0.85	0.6	0.65	0.72
Decision Tree	0.54	0.78	0.61	0.73	0.58	0.76
Adaboost	0.6	0.81	0.65	0.78	0.63	0.79
Gradient Boos	0.61	0.8	0.64	0.79	0.62	0.8
Random Fores	0.64	0.82	0.67	0.8	0.65	81
Extremely Tre	0.65	0.83	0.69	0.81	0.67	0.82
Linear SVM	0.64	0.8	0.61	0.83	0.62	0.81
SVM	0	0.66	0	1	0	0.79

Technique	200X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.6	0.79	0.59	0.8	0.6	0.79
SGD	0.48	0.92	0.91	0.49	0.63	0.64
Naiv Bayes	0.74	0.7	0.23	0.96	0.35	0.81
Decision Tree	0.61	0.83	0.69	0.77	0.65	0.8
Adaboost	0.72	0.86	0.73	0.85	0.72	0.85
Gradient Boostir	0.7	0.85	0.71	0.84	0.7	0.84
Random Forest	0.74	0.85	0.7	0.87	0.72	0.86
Extremely Trees	0.75	0.84	0.69	0.88	0.72	0.86
Linear SVM	0.7	0.84	0.7	0.84	0.7	0.84
SVM	0	0.66	0	1	0	0.79

Technique	400X					
	Precision		Recall		F1	
	B	M	B	M	B	M
KNN	0.37	0.65	0.52	0.5	0.43	0.57
SGD	0.4	0.71	0.74	0.36	0.52	0.48
Naiv Bayes	0.64	0.69	0.26	0.92	0.37	0.78
Decision Tree	0.51	0.75	0.6	0.68	0.55	0.71
Adaboost	0.61	0.8	0.67	0.75	0.63	0.78
Gradient Boos	0.6	0.81	0.68	0.75	0.64	0.78
Random Fores	0.64	0.81	0.68	0.78	0.66	0.8
Extremely Tre	0.64	0.81	0.68	0.78	0.66	0.8
Linear SVM	0.64	0.84	0.74	0.76	0.68	0.8
SVM	0	0.64	0	1	0	0.78

HANDCRAFTED FEATURES

HOG

HOG	40X					
	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.29	0.64	0.2	0.75	0.24	0.69
SGD	0.3	0.65	0.13	0.84	0.18	0.73
Naiv Bayes	0.31	0.65	0.17	0.8	0.22	0.72

HOG	100X					
	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.37	0.68	0.45	0.6	0.41	0.64
SGD	0.36	0.73	0.89	0.15	0.51	0.25
Naiv Bayes	0.21	0.61	0.15	0.71	0.17	0.66

Decision Tree	0.33	0.65	0.39	0.59	0.36	0.62
Adaboost	0.38	0.68	0.41	0.64	0.39	0.66
Gradient Boostir	0.32	0.64	0.32	0.64	0.32	0.64
Random Forest	0.34	0.66	0.36	0.64	0.35	0.65
Extremely Trees	0.34	0.66	0.35	0.66	0.35	0.66
Linear SVM	0.33	0.66	0.16	0.84	0.21	0.74
SVM	0	0.66	0	1	0	0.79

Decision Tree	0.35	0.66	0.43	0.59	0.39	0.63
Adaboost	0.39	0.68	0.42	0.66	0.4	0.67
Gradient Boos	0.38	0.68	0.4	0.65	0.39	0.66
Random Fores	0.34	0.65	0.35	0.64	0.34	0.64
Extremely Tre	0.33	0.65	0.32	0.67	0.32	0.66
Linear SVM	0.25	0.64	0.09	0.85	0.13	0.73
SVM	0	0.66	0	1	0	0.79

	200X					
HOG	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.36	0.87	0.97	0.11	0.53	0.2
SGD	0.39	0.73	0.69	0.45	0.5	0.56
Naiv Bayes	0.36	0.67	0.38	0.65	0.37	0.66
Decision Tree	0.35	0.66	0.46	0.55	0.4	0.6
Adaboost	0.39	0.69	0.51	0.58	0.44	0.63
Gradient Boostir	0.41	0.72	0.56	0.57	0.47	0.64
Random Forest	0.39	0.69	0.44	0.64	0.41	0.66
Extremely Trees	0.41	0.7	0.45	0.66	0.43	0.68
Linear SVM	0.38	0.67	0.28	0.76	0.32	0.71
SVM	0	0.66	0	1	0	0.79

	400X					
HOG	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.37	0.9	0.99	0.05	0.54	0.09
SGD	0.46	0.7	0.47	0.69	0.46	0.69
Naiv Bayes	0.46	0.86	0.87	0.43	0.61	0.57
Decision Tree	0.42	0.69	0.55	0.57	0.48	0.63
Adaboost	0.45	0.73	0.63	0.57	0.53	0.64
Gradient Boos	0.46	0.72	0.6	0.59	0.52	0.65
Random Fores	0.49	0.76	0.65	0.62	0.56	0.68
Extremely Tre	0.51	0.77	0.66	0.64	0.58	0.7
Linear SVM	0.46	0.77	0.73	0.51	0.56	0.61
SVM	0	0.64	0	1	0	0.78

SIFT

	40X					
SIFT	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.59	0.77	0.55	0.8	0.57	0.79
SGD	0.45	0.73	0.51	0.68	0.48	0.7
Naiv Bayes	0.45	0.72	0.49	0.7	0.47	0.71
Decision Tree	0.47	0.73	0.51	0.7	0.49	0.71
Adaboost	0.58	0.77	0.53	0.8	0.55	0.78
Gradient Boostir	0.55	0.77	0.54	0.79	0.55	0.78
Random Forest	0.54	0.74	0.47	0.79	0.51	0.77
Extremely Trees	0.56	0.75	0.47	0.81	0.51	0.78
Linear SVM	0.6	0.77	0.53	0.81	0.56	0.79
SVM	0.57	0.77	0.54	0.79	0.56	0.78

	100X					
SIFT	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.4	0.68	0.38	0.7	0.39	0.69
SGD	0.36	0.78	0.93	0.13	0.52	0.22
Naiv Bayes	0.32	0.64	0.34	0.62	0.33	0.63
Decision Tree	0.43	0.71	0.48	0.67	0.46	0.69
Adaboost	0.41	0.69	0.43	0.67	0.42	0.68
Gradient Boos	0.41	0.69	0.42	0.68	0.41	0.69
Random Fores	0.38	0.67	0.3	0.74	0.33	0.7
Extremely Tre	0.42	0.68	0.3	0.78	0.35	0.73
Linear SVM	0	0.66	0	1	0	0.79
SVM	0	0.66	0	1	0	0.79

	200X					
SIFT	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.41	0.7	0.44	0.67	0.42	0.68
SGD	0.35	0.68	0.67	0.36	0.46	0.47
Naiv Bayes	0.32	0.64	0.36	0.6	0.34	0.62
Decision Tree	0.42	0.7	0.43	0.69	0.43	0.7
Adaboost	0.41	0.7	0.44	0.68	0.42	0.69
Gradient Boostir	0.43	0.71	0.48	0.67	0.45	0.69
Random Forest	0.42	0.69	0.37	0.73	0.4	0.71
Extremely Trees	0.41	0.68	0.36	0.73	0.38	0.71
Linear SVM	0	0.66	0	1	0	0.79
SVM	0	0.66	0	1	0	0.79

	400X					
SIFT	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.44	0.7	0.53	0.61	0.48	0.65
SGD	0.39	0.65	0.35	0.69	0.37	0.67
Naiv Bayes	0.37	0.64	0.36	0.66	0.36	0.65
Decision Tree	0.41	0.67	0.39	0.68	0.4	0.67
Adaboost	0.4	0.66	0.41	0.65	0.41	0.66
Gradient Boos	0.45	0.69	0.46	0.68	0.46	0.68
Random Fores	0.4	0.66	0.37	0.69	0.39	0.67
Extremely Tre	0.41	0.66	0.36	0.71	0.38	0.69
Linear SVM	0	0.64	0	1	0	0.78
SVM	0	0.64	0	1	0	0.78

HARALICK

	40X					
HARALICK	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.44	0.72	0.5	0.67	0.47	0.7
SGD	0.24	0.65	0.03	0.95	0.06	0.77
Naiv Bayes	0.36	0.87	0.96	0.13	0.53	0.22
Decision Tree	0.43	0.71	0.49	0.66	0.46	0.68
Adaboost	0.45	0.73	0.52	0.68	0.48	0.7
Gradient Boostir	0.49	0.75	0.55	0.7	0.52	0.73
Random Forest	0.48	0.74	0.53	0.7	0.5	0.72
Extremely Trees	0.49	0.75	0.56	0.7	0.52	0.72
Linear SVM	0	0.66	0	1	0	0.79
SVM	0	0.66	0	1	0	0.79

	100X					
HARALICK	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.43	0.71	0.49	0.65	0.46	0.68
SGD	0.25	0.64	0.13	0.8	0.17	0.71
Naiv Bayes	0.26	0.64	0.13	0.81	0.17	0.72
Decision Tree	0.41	0.71	0.51	0.61	0.46	0.66
Adaboost	0.47	0.72	0.45	0.73	0.46	0.73
Gradient Boos	0.46	0.72	0.48	0.71	0.47	0.72
Random Fores	0.48	0.72	0.46	0.73	0.47	0.73
Extremely Tre	0.47	0.72	0.45	0.73	0.46	0.73
Linear SVM	0.56	0.75	0.49	0.8	0.52	0.78
SVM	0.59	0.76	0.51	0.81	0.55	0.79

	200X					
HARALICK	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.45	0.76	0.65	0.59	0.53	0.67
SGD	0.47	0.72	0.47	0.72	0.47	0.72
Naiv Bayes	0.44	0.8	0.76	0.49	0.56	0.61
Decision Tree	0.44	0.73	0.56	0.63	0.49	0.68
Adaboost	0.49	0.76	0.6	0.68	0.54	0.72
Gradient Boostir	0.5	0.76	0.6	0.68	0.54	0.72
Random Forest	0.5	0.76	0.6	0.68	0.54	0.72
Extremely Trees	348	0.76	0.6	0.66	0.54	0.71
Linear SVM	0.47	0.76	0.61	0.64	0.53	0.7
SVM	0.56	0.81	0.67	0.73	0.61	0.77

	400X					
HARALICK	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.44	0.7	0.53	0.62	0.48	0.66
SGD	0.4	0.93	0.98	0.17	0.57	0.28
Naiv Bayes	0.39	0.8	0.92	0.17	0.55	0.29
Decision Tree	0.41	0.67	0.43	0.65	0.42	0.66
Adaboost	0.49	0.72	0.53	0.69	0.51	0.71
Gradient Boos	0.51	0.73	0.55	0.7	0.53	0.72
Random Fores	0.51	0.74	0.57	0.68	0.54	0.71
Extremely Tre	0.5	0.73	0.56	0.69	0.53	0.71
Linear SVM	0.63	0.78	0.59	0.8	0.61	0.79
SVM	0.65	0.77	0.57	0.82	0.61	0.8

LBP

	40X					
LBP	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.66	0.85	0.73	0.8	0.69	0.82
SGD	0	0.66	0	1	0	0.79
Naiv Bayes	0.25	0.66	0.02	0.98	0.03	0.78
Decision Tree	0.59	0.79	0.59	0.79	0.59	0.79
Adaboost	0.67	0.85	0.72	0.82	0.69	0.83
Gradient Boostir	0.67	0.86	0.75	0.81	0.71	0.83
Random Forest	0.72	0.84	0.68	0.86	0.7	0.85
Extremely Trees	0.73	0.84	0.69	0.87	0.71	0.85
Linear SVM	0.68	0.85	0.73	0.82	0.7	0.84
SVM	0.69	0.86	0.73	0.83	0.71	0.84

	100X					
LBP	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.57	0.83	0.73	0.71	0.64	0.77
SGD	0.35	1	1	0.04	0.52	0.08
Naiv Bayes	0.39	0.92	0.97	0.19	0.55	0.32
Decision Tree	0.57	0.8	0.63	0.76	0.6	0.78
Adaboost	0.63	0.79	0.58	0.82	0.6	0.8
Gradient Boos	0.66	0.81	0.62	0.83	0.64	0.82
Random Fores	0.67	0.86	0.74	0.81	0.7	0.83
Extremely Tre	0.66	0.84	0.71	0.81	0.69	0.83
Linear SVM	0.64	0.85	0.73	0.79	0.68	0.82
SVM	0.62	0.88	0.8	0.74	0.7	0.8

	200X					
LBP	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.59	0.84	0.74	0.73	0.66	0.78
SGD	0.37	0.86	0.96	0.14	0.53	0.25
Naiv Bayes	0.41	0.87	0.91	0.31	0.56	0.46
Decision Tree	0.56	0.81	0.66	0.73	0.61	0.77
Adaboost	0.58	0.84	0.73	0.72	0.64	0.77
Gradient Boostir	0.61	0.83	0.7	0.77	0.65	0.8
Random Forest	0.67	0.85	0.72	0.81	0.69	0.83
Extremely Trees	0.66	0.85	0.74	0.8	0.7	0.83
Linear SVM	0.69	0.88	0.79	0.2	0.74	0.85
SVM	0.69	0.88	0.78	0.82	0.73	0.85

	400X					
LBP	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.57	0.85	0.8	0.66	0.67	0.74
SGD	0.54	0.79	0.69	0.67	0.61	0.73
Naiv Bayes	0.46	0.9	0.92	0.37	0.61	0.53
Decision Tree	0.6	0.82	0.73	0.72	0.66	0.77
Adaboost	0.63	0.87	0.81	0.73	0.71	0.79
Gradient Boos	0.64	0.86	0.78	0.75	0.7	0.8
Random Fores	0.65	0.86	0.78	0.77	0.71	0.81
Extremely Tre	0.65	0.86	0.78	0.76	0.71	0.81
Linear SVM	0.68	0.91	0.87	0.77	0.76	0.84
SVM	0.69	0.91	0.86	0.78	0.76	0.84

LPQ

	40X					
LPQ	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.65	0.82	0.64	0.82	0.65	0.82
SGD	0	0.66	0	1	0	0.79
Naiv Bayes	0.72	0.67	0.05	0.99	0.1	0.8
Decision Tree	0.61	0.8	0.62	0.8	0.62	0.8
Adaboost	0.72	0.82	0.62	0.88	0.67	0.85
Gradient Boostir	0.71	0.8	0.58	0.88	0.64	0.84
Random Forest	0.79	0.81	0.59	0.92	0.67	0.86
Extremely Trees	0.79	0.8	0.56	0.92	0.66	0.86
Linear SVM	0.77	0.84	0.68	0.89	0.72	0.87
SVM	0.71	0.71	0.24	0.95	0.36	0.81

	100X					
LPQ	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.65	0.81	0.62	0.83	0.63	0.82
SGD	0.43	0.76	0.67	0.55	0.53	0.64
Naiv Bayes	0.57	0.67	0.1	0.96	0.16	0.79
Decision Tree	0.59	0.78	0.57	0.8	0.58	0.79
Adaboost	0.68	0.81	0.61	0.85	0.64	0.83
Gradient Boos	0.69	0.81	0.62	0.85	0.66	0.83
Random Fores	0.71	0.77	0.49	0.89	0.58	0.83
Extremely Tre	0.69	0.75	0.44	0.9	0.54	0.82
Linear SVM	0.72	0.78	0.52	0.89	0.61	0.83
SVM	1	0.66	0.03	1	0.07	0.8

	200X					
LPQ	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.65	0.82	0.65	0.82	0.65	0.82
SGD	0.35	1	1	0.03	0.52	0.05
Naiv Bayes	0.43	0.66	0.09	0.93	0.15	0.78
Decision Tree	0.59	0.79	0.6	0.78	0.59	0.78
Adaboost	0.67	0.82	0.64	0.83	0.65	0.82
Gradient Boostir	0.63	0.81	0.64	0.841	0.63	0.81
Random Forest	0.71	0.79	0.55	0.88	0.62	0.83
Extremely Trees	0.7	0.76	0.47	0.89	0.56	0.82
Linear SVM	0.7	0.83	0.66	0.85	0.68	0.84
SVM	0.89	0.68	0.09	0.99	0.17	0.81

	400X					
LPQ	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.63	0.78	0.59	0.81	0.61	0.79
SGD	0	0.64	0	1	0	0.78
Naiv Bayes	0.44	0.65	0.19	0.87	0.26	0.75
Decision Tree	0.57	0.74	0.52	0.78	0.55	0.76
Adaboost	0.7	0.81	0.66	0.84	0.68	0.83
Gradient Boos	0.69	0.82	69	0.83	0.69	0.83
Random Fores	0.68	0.76	0.54	0.85	0.6	0.81
Extremely Tre	0.65	0.73	0.44	0.86	0.53	0.79
Linear SVM	0.74	0.79	0.59	0.88	0.65	0.83
SVM	0.71	0.71	0.33	0.92	0.45	0.8

LBP + LPQ

	40X					
LBP + LPQ	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.66	0.78	0.55	0.85	0.6	0.82
SGD	0	0.66	0	1	0	0.79
Naiv Bayes	0.67	0.66	0.04	0.99	0.07	0.8
Decision Tree	0.71	0.82	0.64	0.87	0.67	0.84
Adaboost	0.78	0.82	0.63	0.91	0.7	0.86
Gradient Boostir	0.8	0.85	0.69	0.91	0.75	0.88
Random Forest	0.84	0.83	0.62	0.94	0.71	0.88
Extremely Trees	0.87	0.81	0.58	0.96	0.69	0.88
Linear SVM	0.83	0.87	0.74	0.92	0.78	0.9
SVM	0.77	0.75	0.39	0.94	0.52	0.83

	100X					
LBP + LPQ	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.66	0.79	0.57	0.85	0.61	0.82
SGD	0.95	0.67	0.07	1	0.13	0.8
Naiv Bayes	0.58	0.68	0.12	0.95	0.2	0.79
Decision Tree	0.59	0.77	0.54	0.8	0.56	0.79
Adaboost	0.76	0.82	0.62	90	0.68	0.86
Gradient Boos	0.73	0.82	0.62	0.88	0.67	0.85
Random Fores	0.76	0.78	0.51	0.91	0.61	0.84
Extremely Tre	0.74	0.76	0.46	0.91	0.57	0.83
Linear SVM	0.85	0.82	0.61	0.95	0.71	0.88
SVM	0.93	0.73	0.31	0.99	0.47	0.84

	200X					
LBP + LPQ	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.68	0.84	0.7	0.83	0.69	0.84
SGD	0.36	0.97	0.1	0.06	0.52	0.11

	400X					
LBP + LPQ	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.63	0.8	0.64	0.79	0.64	0.79
SGD	0.56	0.85	0.8	0.65	0.66	0.73

Naiv Bayes	0.51	0.67	0.163	0.93	0.21	0.78
Decision Tree	0.63	0.82	0.66	0.8	0.64	0.81
Adaboost	0.72	0.88	0.77	0.85	0.75	0.86
Gradient Boostir	0.71	0.89	0.8	0.83	0.75	0.86
Random Forest	0.71	0.82	0.64	0.86	0.67	0.84
Extremely Trees	0.7	0.8	0.57	0.87	0.63	0.83
Linear SVM	0.89	0.85	0.69	0.96	0.77	0.9
SVM	0.89	0.84	0.66	0.96	0.76	0.9

Naiv Bayes	0.5	0.67	0.24	0.87	0.32	0.75
Decision Tree	0.6	0.77	0.59	0.78	0.6	0.77
Adaboost	0.69	0.88	0.8	0.8	0.74	0.83
Gradient Boos	0.71	0.89	0.83	0.81	0.77	0.85
Random Fores	0.7	0.78	0.58	0.86	0.63	0.82
Extremely Tre	0.66	0.75	0.5	0.85	0.57	0.8
Linear SVM	0.75	0.94	0.9	0.83	0.82	0.88
SVM	0.75	88	0.79	0.85	0.77	0.86

LBP + LPQ + Haralick

	40X					
LBP + LPQ + H	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.63	0.74	0.41	0.87	0.49	0.8
SGD	0.4	0.73	0.66	0.48	0.49	0.58
Naiv Bayes	0.74	0.67	0.05	0.99	0.1	0.8
Decision Tree	0.71	0.81	0.62	0.87	0.66	0.84
Adaboost	0.84	0.84	0.65	0.93	0.74	0.88
Gradient Boostir	0.81	0.84	0.65	0.92	0.72	0.88
Random Forest	0.87	0.83	0.62	0.95	0.73	0.89
Extremely Trees	0.89	0.8	0.54	0.97	0.67	0.88
Linear SVM	0.82	0.88	0.75	0.92	0.78	0.9
SVM	0.79	0.77	0.47	0.93	0.59	0.85

	100X					
LBP + LPQ + H	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.49	0.72	0.43	0.77	0.46	0.74
SGD	0.49	0.71	0.39	0.78	0.44	0.74
Naiv Bayes	0.57	0.67	0.12	0.95	0.2	0.79
Decision Tree	0.57	0.77	0.54	0.79	0.55	0.78
Adaboost	0.75	0.8	0.57	0.9	0.65	0.85
Gradient Boos	0.8	0.82	0.62	0.92	0.7	0.87
Random Fores	0.74	0.77	0.48	0.91	0.58	0.84
Extremely Tre	0.72	0.76	0.45	0.91	0.55	0.83
Linear SVM	0.78	0.84	0.67	0.9	0.72	0.87
SVM	0.81	0.76	0.44	0.95	0.57	0.84

	200X					
LBP + LPQ + H	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.48	0.75	0.56	0.69	0.52	0.72
SGD	0.77	0.71	0.23	0.96	0.36	0.81
Naiv Bayes	0.54	0.68	0.14	0.94	0.22	0.79
Decision Tree	0.64	0.83	0.69	0.8	0.67	0.82
Adaboost	0.74	0.88	0.77	0.86	0.76	0.87
Gradient Boostir	0.72	0.87	0.75	0.85	0.74	0.86
Random Forest	0.71	0.82	0.64	0.86	0.67	0.84
Extremely Trees	0.71	0.81	0.6	0.87	0.65	0.84
Linear SVM	0.84	0.86	0.72	0.93	0.78	0.9
SVM	0.87	0.86	0.71	0.94	0.78	0.9

	400X					
LBP + LPQ + H	Precision		Recall		F1	
Technique	B	M	B	M	B	M
KNN	0.47	0.71	0.54	0.65	0.5	0.68
SGD	0.43	0.93	0.96	0.28	0.6	0.43
Naiv Bayes	0.54	0.68	0.27	0.87	0.36	0.76
.	0.6	0.76	0.57	0.78	0.58	0.77
Adaboost	0.7	0.86	0.76	0.82	0.73	0.84
Gradient Boos	0.73	0.86	0.77	0.84	0.75	0.85
Random Fores	0.72	0.8	0.63	0.86	0.67	0.83
Extremely Tre	0.7	0.77	0.54	0.87	0.61	0.82
Linear SVM	0.77	0.87	0.77	0.87	0.77	0.87
SVM	0.74	0.85	0.73	0.86	0.74	0.85