TAX TAXA TAX	200X	Tochnique	Accuracy
Model DL	Feature Xception	Technique LSTM	Accuracy 0.8871
DL		ResNet 152	0.8871
DL + ML (TL)	VGG 19 + RESNET 152 + IV3	SVM	0.8682
DL + ML (TL)	VGG 19 + RESNET 152	SVM	0.8642
HF + ML	LBP + LPQ	Linear SVM	0.8629
HF + ML	LBP + LPQ + GLCM	SVM	0.8629
DL + ML	VGG 19	Extremely Trees	0.8601
HF + ML	LBP + LPQ + GLCM	Linear SVM	0.8575
HF + ML	LBP + LPQ	SVM	0.8548
DL + ML DL + ML	VGG 19 VGG 19	Random Forest SVM	0.8521 0.8427
DL + ML (TL)	VGG 19 + RESNET 152	Random Forest	0.8427
DL + ML (TL)	VGG 19 + RESNET 152	Extremely Trees	0.8373
DL + ML (TL)	VGG 19 + RESNET 152 + IV3	Gradient Boosting	0.836
DL + ML (TL)	VGG 19 + RESNET 152 + IV3	Random Forest	0.8333
DL + ML (TL)	VGG 19 + RESNET 152 + IV3	Extremely Trees	0.8293
HF + ML	LBP + LPQ + GLCM	Adaboost	0.8293
DL + ML (TL)	VGG 19 + RESNET 152	<b>Gradient Boosting</b>	0.8239
HF + ML	LBP + LPQ	Adaboost	0.8198
DL + ML (TL)	VGG 19 + RESNET 152	Linear SVM	0.8185
DL + ML (TL)	VGG 19 + RESNET 152 + IV3	Linear SVM	0.8185
HF + ML	LBP + LPQ	Gradient Boosting	0.8185
DL + ML (TL)	VGG 19 VGG 19 + RESNET 152	Linear SVM Adaboost	0.8172
DL + ML (TL) DL + ML (FT)	RESNET 152	SVM	0.8172 0.8172
HF + ML	LBP + LPQ + GLCM	Gradient Boosting	0.8172
DL + ML (FT)	VGG 19 + RESNET 152	Extremely Trees	0.8145
DL + ML (FT)	VGG 19 + RESNET 152 + IV3	Extremely Trees	0.8145
DL + ML (FT)	RESNET 152	Extremely Trees	0.8118
DL + ML (FT)	RESNET 152	Linear SVM	0.8118
DL + ML (FT)	VGG 19 + RESNET 152	Random Forest	0.8104
	VGG 19 + RESNET 152 + IV3	Random Forest	0.8104
DL + ML (FT)	VGG 19 + RESNET 152 + IV3	Adaboost	0.8091
HF + ML	LBP	Linear SVM	0.8064
HF + ML	LBP	SVM	0.8064
DL + ML DL + ML (TL)	VGG 19	Gradient Boosting Adaboost	0.8037 0.8037
DL + ML (TL) DL + ML (FT)	VGG 19 + RESNET 152 + IV3 RESNET 152	Random Forest	0.8037
DL + ML (FT)	VGG 19 + RESNET 152	Gradient Boosting	0.7983
DL + ML (FT)	VGG 19 + RESNET 152 + IV3	Gradient Boosting	0.7956
DL + ML (FT)	VGG 19 + RESNET 152 + IV3	Linear SVM	0.793
DL + ML	VGG 19	Adaboost	0.7916
DL + ML (FT)	VGG 19 + RESNET 152	Adaboost	0.7916
DL + ML (FT)	VGG 19 + RESNET 152	Linear SVM	0.7916
HF + ML	LPQ	Linear SVM	0.7876
HF + ML	LBP + LPQ	Random Forest	0.7876
HF + ML	LBP + LPQ	KNN	0.7849
HF + ML DL + ML	LBP + LPQ + GLCM VGG 19	Random Forest SGD	0.7849 0.7836
DL + ML	VGG 19	Naive Bayes	0.7836
DL + ML (FT)	VGG 19 + RESNET 152	KNN	0.7822
HF + ML	LBP	Random Forest	0.7795
HF + ML	LBP	Extremely Trees	0.7782
HF + ML	LBP + LPQ + GLCM	Extremely Trees	0.7768
DL + ML (TL)	VGG 19 + RESNET 152	Naive Bayes	0.7728
DL + ML (FT)	RESNET 152	KNN	0.7728
DL + ML (FT)	VGG 19 + RESNET 152	SGD	0.7715
DL + ML (TL)	RESNET 152	Linear SVM	0.77016
	LBP + LPQ	Extremely Trees	0.7688
HF + ML	·	<del>                                     </del>	A = a = -
HF + ML HF + ML	LPQ	Random Forest	0.7674
HF + ML HF + ML HF + ML	LPQ LPQ	Random Forest Adaboost	0.7661
HF + ML HF + ML HF + ML DL + ML (FT)	LPQ LPQ VGG 19	Random Forest Adaboost Random Forest	0.7661 0.7634
HF + ML HF + ML HF + ML DL + ML (FT) HF + ML	LPQ LPQ VGG 19 LBP + LPQ + GLCM	Random Forest Adaboost Random Forest Decision Tree	0.7661 0.7634 0.7634
HF + ML HF + ML HF + ML DL + ML (FT) HF + ML	LPQ LPQ VGG 19	Random Forest Adaboost Random Forest	0.7661 0.7634
HF + ML HF + ML HF + ML DL + ML (FT) HF + ML	LPQ LPQ VGG 19 LBP + LPQ + GLCM LPQ	Random Forest Adaboost Random Forest Decision Tree KNN	0.7661 0.7634 0.7634 0.762
HF + ML HF + ML HF + ML  DL + ML (FT) HF + ML HF + ML DL + ML (TL)	LPQ LPQ VGG 19 LBP + LPQ + GLCM LPQ VGG 19 + RESNET 152 + IV3	Random Forest Adaboost Random Forest Decision Tree KNN Naive Bayes	0.7661 0.7634 0.7634 0.762 0.7607
HF + ML HF + ML  HF + ML  DL + ML (FT) HF + ML  HF + ML  DL + ML (TL)  DL + ML (TT)	LPQ LPQ VGG 19 LBP + LPQ + GLCM LPQ VGG 19 + RESNET 152 + IV3 VGG 19	Random Forest Adaboost Random Forest Decision Tree KNN Naive Bayes Extremely Trees	0.7661 0.7634 0.7634 0.762 0.7607 0.7594
HF + ML HF + ML  HF + ML  DL + ML (FT) HF + ML  DL + ML (TL)  DL + ML (TT)  DL + ML (FT)  DL + ML (FT)  DL + ML	LPQ LPQ VGG 19 LBP + LPQ + GLCM LPQ VGG 19 + RESNET 152 + IV3 VGG 19 VGG 19 VGG 19 VGG 19 VGG 19 VGG 19 + RESNET 152	Random Forest Adaboost Random Forest Decision Tree KNN Naive Bayes Extremely Trees Linear SVM KNN	0.7661 0.7634 0.7634 0.762 0.7607 0.7594 0.7594 0.754
HF + ML HF + ML HF + ML  DL + ML (FT) HF + ML  DL + ML (TL)  DL + ML (FT)  DL + ML (FT)  DL + ML (FT)  DL + ML (TL)  DL + ML (TL)	LPQ LPQ VGG 19 LBP + LPQ + GLCM LPQ VGG 19 + RESNET 152 + IV3 VGG 19 VGG 19 VGG 19 VGG 19 VGG 19 VGG 19 + RESNET 152 VGG 19 + RESNET 152 VGG 19 + RESNET 152 + IV3	Random Forest Adaboost Random Forest Decision Tree KNN Naive Bayes Extremely Trees Linear SVM KNN KNN	0.7661 0.7634 0.7634 0.762 0.7607 0.7594 0.7594 0.754 0.754
HF + ML HF + ML HF + ML  DL + ML (FT) HF + ML  DL + ML (TL)  DL + ML (FT)  DL + ML (FT)  DL + ML  TL)	LPQ LPQ VGG 19 LBP + LPQ + GLCM LPQ VGG 19 + RESNET 152 + IV3 VGG 19 VGG 19 VGG 19 VGG 19 VGG 19 VGG 19 + RESNET 152 + IV3 RESNET 152	Random Forest Adaboost Random Forest Decision Tree KNN Naive Bayes Extremely Trees Linear SVM KNN KNN KNN Random Forest	0.7661 0.7634 0.7634 0.762 0.7607 0.7594 0.7594 0.754 0.754 0.754
HF + ML HF + ML HF + ML  DL + ML (FT) HF + ML  DL + ML (TL)  DL + ML (TT)  DL + ML (FT)  DL + ML  DL + ML  DL + ML  DL + ML  HF + ML  DL + ML  DL + ML  DL + ML  TL  DL + ML  TL  DL + ML  TL  HF + ML	LPQ LPQ VGG 19 LBP + LPQ + GLCM LPQ VGG 19 + RESNET 152 + IV3 VGG 19 VGG 19 VGG 19 VGG 19 VGG 19 VGG 19 + RESNET 152 VGG 19 + RESNET 152 LPQ	Random Forest Adaboost Random Forest Decision Tree KNN Naive Bayes Extremely Trees Linear SVM KNN KNN KNN Random Forest Gradient Boosting	0.7661 0.7634 0.7634 0.762 0.7607 0.7594 0.7594 0.754 0.754 0.754 0.7486 0.7486
HF + ML HF + ML HF + ML  DL + ML (FT) HF + ML  DL + ML (TL)  DL + ML (FT)  DL + ML (FT)  DL + ML (FT)  DL + ML (TL)  DL + ML (TL)  DL + ML (TL)  HF + ML  HF + ML	LPQ LPQ VGG 19 LBP + LPQ + GLCM LPQ VGG 19 + RESNET 152 + IV3 VGG 19 VGG 19 VGG 19 VGG 19 VGG 19 + RESNET 152 VGG 19 + RESNET 152 LPQ LPQ LPQ	Random Forest Adaboost Random Forest Decision Tree KNN Naive Bayes Extremely Trees Linear SVM KNN KNN KNN RAND Random Forest Gradient Boosting Extremely Trees	0.7661 0.7634 0.7634 0.762 0.7607 0.7594 0.7594 0.754 0.754 0.754 0.7486 0.7486 0.7486
HF + ML HF + ML HF + ML  DL + ML (FT) HF + ML  DL + ML (TL)  DL + ML (FT)  DL + ML (FT)  DL + ML (TL)  DL + ML (TL)  DL + ML (TL)  HF + ML  HF + ML  HF + ML	LPQ LPQ VGG 19 LBP + LPQ + GLCM LPQ VGG 19 + RESNET 152 + IV3 VGG 19 VGG 19 VGG 19 VGG 19 VGG 19 + RESNET 152 VGG 19 + RESNET 152 LPQ LPQ LBP + LPQ	Random Forest Adaboost Random Forest Decision Tree KNN Naive Bayes Extremely Trees Linear SVM KNN KNN KNN CONN KNN CONN CONN CONN CON	0.7661 0.7634 0.7634 0.762 0.7607 0.7594 0.7594 0.754 0.754 0.754 0.7486 0.7486 0.7486
HF + ML HF + ML HF + ML  DL + ML (FT) HF + ML  DL + ML (TL)  DL + ML (FT)  DL + ML (FT)  DL + ML (TL)  DL + ML (TL)  DL + ML (TL)  HF + ML  HF + ML  HF + ML  DL + ML (TL)	LPQ LPQ VGG 19 LBP + LPQ + GLCM LPQ VGG 19 + RESNET 152 + IV3 VGG 19 VGG 19 VGG 19 VGG 19 VGG 19 + RESNET 152 VGG 19 + RESNET 152 LPQ LPQ LBP + LPQ RESNET 152	Random Forest Adaboost Random Forest Decision Tree KNN Naive Bayes Extremely Trees Linear SVM KNN KNN Random Forest Gradient Boosting Extremely Trees Decision Tree Extremely Trees	0.7661 0.7634 0.7634 0.762 0.7607 0.7594 0.7594 0.754 0.754 0.754 0.7486 0.7486 0.7486 0.7486 0.7486
HF + ML HF + ML HF + ML  DL + ML (FT) HF + ML  DL + ML (FT)  DL + ML (FT)  DL + ML (FT)  DL + ML (TL)  DL + ML (TL)  DL + ML (TL)  HF + ML  HF + ML  HF + ML  HF + ML  DL + ML (TL)  DL + ML (TL)	LPQ LPQ VGG 19 LBP + LPQ + GLCM LPQ VGG 19 + RESNET 152 + IV3 VGG 19 VGG 19 VGG 19 VGG 19 + RESNET 152 VGG 19 + RESNET 152 LPQ LPQ LPQ RESNET 152 VGG 19	Random Forest Adaboost Random Forest Decision Tree KNN Naive Bayes Extremely Trees Linear SVM KNN KNN Random Forest Gradient Boosting Extremely Trees Decision Tree Extremely Trees	0.7661 0.7634 0.7634 0.762 0.7607 0.7594 0.7594 0.754 0.754 0.7486 0.7486 0.7486 0.7486 0.7459 0.7459
HF + ML HF + ML HF + ML  DL + ML (FT) HF + ML  DL + ML (FT)  DL + ML (FT)  DL + ML (FT)  DL + ML (TL)  DL + ML (TL)	LPQ LPQ VGG 19 LBP + LPQ + GLCM LPQ VGG 19 + RESNET 152 + IV3 VGG 19 VGG 19 VGG 19 VGG 19 VGG 19 + RESNET 152 VGG 19 + RESNET 152 LPQ LPQ LPQ LBP + LPQ RESNET 152 VGG 19 RESNET 152 VGG 19 RESNET 152	Random Forest Adaboost Random Forest Decision Tree KNN Naive Bayes Extremely Trees Linear SVM KNN KNN KNN CONTRACTOR CONT	0.7661 0.7634 0.7634 0.762 0.7607 0.7594 0.7594 0.754 0.754 0.754 0.7486 0.7486 0.7486 0.7486 0.7459 0.7459 0.7446
HF + ML  HF + ML  HF + ML  DL + ML (FT)  HF + ML  DL + ML (TL)  DL + ML (FT)  DL + ML (TL)  HF + ML  HF + ML  DL + ML (TL)  DL + ML (FT)  DL + ML (FT)  DL + ML (FT)	LPQ LPQ VGG 19 LBP + LPQ + GLCM LPQ VGG 19 + RESNET 152 + IV3 VGG 19 VGG 19 VGG 19 VGG 19 + RESNET 152 VGG 19 + RESNET 152 + IV3 RESNET 152 LPQ LPQ LPQ LBP + LPQ RESNET 152 VGG 19 RESNET 152 LPQ RESNET 152 LPQ	Random Forest Adaboost Random Forest Decision Tree KNN Naive Bayes Extremely Trees Linear SVM KNN KNN Random Forest Gradient Boosting Extremely Trees Decision Tree Extremely Trees SGD Gradient Boosting Gradient Boosting	0.7661 0.7634 0.7634 0.762 0.7607 0.7594 0.7594 0.754 0.754 0.7486 0.7486 0.7486 0.7486 0.7459 0.7459 0.7446
HF + ML HF + ML HF + ML  DL + ML (FT) HF + ML  DL + ML (FT)  DL + ML (FT)  DL + ML (FT)  DL + ML (TL)  DL + ML (TL)	LPQ LPQ VGG 19 LBP + LPQ + GLCM LPQ VGG 19 + RESNET 152 + IV3 VGG 19 VGG 19 VGG 19 VGG 19 VGG 19 + RESNET 152 VGG 19 + RESNET 152 LPQ LPQ LPQ LBP + LPQ RESNET 152 VGG 19 RESNET 152 VGG 19 RESNET 152	Random Forest Adaboost Random Forest Decision Tree KNN Naive Bayes Extremely Trees Linear SVM KNN KNN KNN CONTRACTOR CONT	0.7661 0.7634 0.7634 0.762 0.7607 0.7594 0.7594 0.754 0.754 0.754 0.7486 0.7486 0.7486 0.7486 0.7459 0.7459 0.7446

200X			
Model	Feature	Technique	AUC
DL		ResNet 152	1
DL	Xception	LSTM	0.97
	VGG 19 + RESNET 152	SVM	0.93
DL + ML (TL)	VGG 19 + RESNET 152 + IV3	SVM	0.93
DL + ML	VGG 19	SVM	0.92
DL + ML	VGG 19	Random Forest	0.91
DL + ML	VGG 19	Extremely Trees	0.91
	VGG 19 + RESNET 152	Random Forest	0.91
	VGG 19 + RESNET 152	Extremely Trees Random Forest	0.91
	VGG 19 + RESNET 152 + IV3 VGG 19 + RESNET 152 + IV3	Extremely Trees	0.91 0.91
HF + ML	LBP + LPQ	Linear SVM	0.91
HF + ML	LBP + LPQ	SVM	0.91
HF + ML	LBP + LPQ + GLCM	Linear SVM	0.91
DL + ML	VGG 19	Linear SVM	0.9
	VGG 19 + RESNET 152	Linear SVM	0.9
DL + ML (TL)	VGG 19 + RESNET 152 + IV3	Gradient Boosting	0.9
HF + ML	LBP + LPQ + GLCM	SVM	0.9
DL + ML (TL)	VGG 19 + RESNET 152	Gradient Boosting	0.89
DL + ML (TL)	VGG 19 + RESNET 152 + IV3	Adaboost	0.89
DL + ML (TL)	VGG 19 + RESNET 152 + IV3	Linear SVM	0.89
DL + ML (FT)	RESNET 152	Extremely Trees	0.89
HF + ML	LBP + LPQ	Adaboost	0.89
HF + ML	LBP + LPQ	Gradient Boosting	0.89
HF + ML	LBP + LPQ + GLCM	Adaboost	0.89
HF + ML	LBP + LPQ + GLCM	Gradient Boosting	0.89
DL + ML (TL)	VGG 19 + RESNET 152	Adaboost	0.88
DL + ML (FT)	RESNET 152	Random Forest	0.88
DL + ML (FT)	RESNET 152	Linear SVM	0.88
DL + ML (FT)	VGG 19 + RESNET 152 + IV3	Extremely Trees	0.88
DL + ML	VGG 19	Gradient Boosting	0.87
DL + ML (FT)	RESNET 152	SVM	0.87
DL + ML (FT)	VGG 19 + RESNET 152	Random Forest	0.87
_ , ,	VGG 19 + RESNET 152 VGG 19 + RESNET 152 + IV3	Extremely Trees Random Forest	0.87 0.87
HF + ML	LBP	Extremely Trees	0.87
HF + ML	LBP	SVM	0.87
HF + ML	LBP + LPQ	Random Forest	0.87
HF + ML	LBP + LPQ + GLCM	Random Forest	0.87
DL + ML	VGG 19	Adaboost	0.86
DL + ML (FT)	VGG 19 + RESNET 152 + IV3	Adaboost	0.86
HF + ML	LBP	Random Forest	0.86
HF + ML	LBP	Linear SVM	0.86
DL + ML (TL)	VGG 19 + RESNET 152	SGD	0.85
DL + ML (FT)	VGG 19 + RESNET 152	Gradient Boosting	0.85
DL + ML (FT)	VGG 19 + RESNET 152	Linear SVM	0.85
DL + ML (FT)	VGG 19 + RESNET 152 + IV3	Gradient Boosting	0.85
HF + ML	LPQ	Random Forest	0.85
HF + ML	LBP + LPQ	Extremely Trees	0.85
HF + ML	LBP + LPQ + GLCM	Extremely Trees	0.85
DL + ML	VGG 19	SGD	0.84
DL + ML	VGG 19	Naive Bayes	0.84
DL + ML (FT)	VGG 19 + RESNET 152	Adaboost	0.84
HF + ML	LPQ	Extremely Trees	0.84
HF + ML	LPQ PESNET 152	Linear SVM Random Forest	0.84
DL + ML (TL) DL + ML (TL)	RESNET 152 RESNET 152	Linear SVM	0.83 0.83
	VGG 19 + RESNET 152 + IV3	Linear SVM	0.83
DL + ML (FI)	RESNET 152	Extremely Trees	0.83
HF + ML	LBP	Gradient Boosting	0.82
HF + ML	LPQ	Adaboost	0.82
HF + ML	LBP + LPQ	KNN	0.82
	VGG 19 + RESNET 152	Naive Bayes	0.81
	VGG 19 + RESNET 152 + IV3	SGD	0.81
DL + ML (FT)	RESNET 152	KNN	0.81
DL + ML (FT)	RESNET 152	Adaboost	0.81
DL + ML (FT)	RESNET 152	Gradient Boosting	0.81
HF + ML	LBP	Adaboost	0.81
HF + ML	LPQ	Gradient Boosting	0.81
DL + ML (TL)	RESNET 152	SGD	0.8
DL + ML (TL)	RESNET 152	Adaboost	0.8
DL + ML (TL)	RESNET 152	Gradient Boosting	0.8
DL + ML (TL)	VGG 19 + RESNET 152 + IV3	Naive Bayes	0.8
DL + ML	VGG 19	KNN	0.79
DL + ML (TL)	VGG 19 + RESNET 152	KNN	0.79
DL + ML (TL)	VGG 19 + RESNET 152 + IV3	KNN	0.79
DL + ML (FT)	VGG 19 + RESNET 152	KNN	0.79
HF + ML	LBP	KNN	0.78
HF + ML DL + ML (FT)	LPQ RESNET 152	KNN	0.78 0.77
HF + ML	LBP + LPQ	SGD	
TIVIL	בטר ד גרע	שטע	0.77

DL + ML (TL) \ HF + ML		I	
HF + ML L DL + ML (FT) \ DL + ML (TL) \	VGG 19 + RESNET 152 + IV3	Decision Tree	0.7352
DL + ML (FT) \ DL + ML (TL) \	VGG 19 + RESNET 152	SGD	0.7338
DL + ML (TL)	LBP	KNN	0.7338
DL + ML (TL)	VGG 19 + RESNET 152	Decision Tree	0.7325
	VGG 19 + RESNET 152	Decision Tree	0.7284
DL + ML (FT) \	VGG 19	Gradient Boosting	0.7271
DL + ML (FT) \	VGG 19	Adaboost	0.7258
	RESNET 152	Adaboost	0.7258
DL + ML (FT) \	VGG 19 + RESNET 152 + IV3	KNN	0.7258
HF + ML L	LBP	Adaboost	0.7231
DL + ML (TL) \	VGG 19 + RESNET 152 + IV3	SGD	0.7204
	LPQ	Decision Tree	0.7177
	RESNET 152	Naive Bayes	0.7163
HF + ML L	LBP + LPQ + GLCM	SGD	0.7123
DL + ML (FT) \	VGG 19 + RESNET 152 + IV3	Naive Bayes	0.7083
HF + ML	Haralick	Linear SVM	0.7083
	LBP	Decision Tree	0.7069
DL + ML (TL) F	RESNET 152	KNN	0.7016
DL + ML (FT) \	VGG 19 + RESNET 152	Naive Bayes	0.7016
DL + ML (FT)	VGG 19	KNN	0.6962
	Haralick	SVM	0.6962
	LPQ	SVM	0.6854
` /	RESNET 152	Decision Tree	0.6774
DL + ML (TL) F	RESNET 152	SGD	0.6747
	VGG 19	Decision Tree	0.6747
	RESNET 152	Decision Tree	0.672
	VGG 19	Naive Bayes	0.668
	RESNET 152	Naive Bayes	0.6653
HF + ML	LBP + LPQ + GLCM	Naive Bayes	0.6639
	VGG 19	Decision Tree	0.6612
	LBP + LPQ	Naive Bayes	0.6586
	RESNET 152	SVM	0.6572
DL + ML (TL)	IV3	Linear SVM	0.6572
	V3	SVM	0.6572
	VGG 19	SVM	0.6572
` '	V3	SVM	0.6572
DL + ML (FT) \	VGG 19 + RESNET 152	SVM	0.6572
DL + ML (FT) \	VGG 19 + RESNET 152 + IV3	SVM	0.6572
HF + ML	HOG	SVM	0.6572
	SIFT	Linear SVM	0.6572
	SIFT	SVM	0.6572
· ,	IV3	SGD	0.6545
HF + ML	Haralick	Gradient Boosting	0.6532
HF + ML H	Haralick	Adaboost	0.6518
DL + ML (FT)	IV3	SGD	0.6505
HF + ML L	LPQ	Naive Bayes	0.6465
	LBP + LPQ + GLCM	KNN	0.6451
	Haralick	Random Forest	0.6411
DL + ML (FT) F	RESNET 152	SGD	0.6344
HF + ML H	Haralick	SGD	0.6344
DL + ML (FT)	VGG 19 + RESNET 152 + IV3	SGD	0.633
	Haralick	Extremely Trees	0.6303
	Haralick	KNN	
			0.6102
HF + ML	SIFT	Random Forest	0.6088
HF + ML	Haralick	Decision Tree	0.6061
HF + ML	SIFT	Gradient Boosting	0.6048
	SIFT	Decision Tree	0.6021
	SIFT	Extremely Trees	0.6008
	SIFT	Adaboost	0.5954
HF + ML	HOG	Linear SVM	0.594
HF + ML	SIFT	KNN	0.5913
	HOG	Extremely Trees	0.59
	V3	Random Forest	
			0.5833
HF + ML	Haralick	Naive Bayes	0.5833
	V3	Extremely Trees	0.5712
DL + ML (FT)	HOG	Gradient Boosting	0.5712
	HOG	Random Forest	0.5712
HF + ML		Adaboost	
HF + ML H	V3		() 5677
HF + ML HF + ML HDL + ML (FT)	V3		0.5672
HF + ML H HF + ML H DL + ML (FT) I DL + ML (TL) I	V3	Adaboost	0.5618
HF + ML H HF + ML H DL + ML (FT) I DL + ML (TL) I HF + ML	V3 HOG	Adaboost Naive Bayes	0.5618 0.5577
HF + ML	V3	Adaboost Naive Bayes Decision Tree	0.5618 0.5577 0.5564
HF + ML	V3 HOG	Adaboost Naive Bayes	0.5618 0.5577
HF + ML	V3 HOG V3	Adaboost Naive Bayes Decision Tree Adaboost	0.5618 0.5577 0.5564 0.5564
HF + ML	V3 HOG V3 HOG V3	Adaboost Naive Bayes Decision Tree Adaboost Gradient Boosting	0.5618 0.5577 0.5564 0.5564 0.5537
HF + ML	IV3 HOG IV3 HOG IV3	Adaboost Naive Bayes Decision Tree Adaboost Gradient Boosting Gradient Boosting	0.5618 0.5577 0.5564 0.5564 0.5537 0.5524
HF + ML	V3 HOG V3 HOG V3 V3	Adaboost Naive Bayes Decision Tree Adaboost Gradient Boosting Gradient Boosting Naive Bayes	0.5618 0.5577 0.5564 0.5564 0.5537 0.5524 0.5376
HF + ML   H HF + ML   H DL + ML (FT)   I DL + ML (TL)   H HF + ML   H DL + ML (FT)   H HF + ML   H DL + ML (TL)   I DL + ML (FT)   I DL + ML (FT)   I	V3 HOG V3 HOG V3 V3 V3 V3 V3	Adaboost Naive Bayes Decision Tree Adaboost Gradient Boosting Gradient Boosting Naive Bayes KNN	0.5618 0.5577 0.5564 0.5564 0.5537 0.5524 0.5376
HF + ML   H HF + ML   H DL + ML (FT)   I DL + ML (TL)   H HF + ML   H DL + ML (FT)   H HF + ML   H DL + ML (TL)   I DL + ML (FT)   I	V3 HOG V3 HOG V3 V3	Adaboost Naive Bayes Decision Tree Adaboost Gradient Boosting Gradient Boosting Naive Bayes	0.5618 0.5577 0.5564 0.5564 0.5537 0.5524 0.5376
HF + ML   H HF + ML   H DL + ML (FT)   I DL + ML (TL)   H HF + ML   H DL + ML (FT)   I HF + ML   H DL + ML (TL)   I DL + ML (TL)   I DL + ML (FT)   I	V3 HOG V3 HOG V3 V3 V3 V3 V3	Adaboost Naive Bayes Decision Tree Adaboost Gradient Boosting Gradient Boosting Naive Bayes KNN	0.5618 0.5577 0.5564 0.5564 0.5537 0.5524 0.5376
HF + ML   H HF + ML   H DL + ML (FT)   I DL + ML (TL)   H HF + ML   H DL + ML (FT)   I HF + ML   H DL + ML (TL)   I DL + ML (TL)   I DL + ML (FT)   I	V3 HOG V3 HOG V3 V3 V3 V3 V3 V3 V3	Adaboost Naive Bayes Decision Tree Adaboost Gradient Boosting Gradient Boosting Naive Bayes KNN Random Forest Linear SVM	0.5618 0.5577 0.5564 0.5564 0.5537 0.5524 0.5376 0.5376 0.5336 0.5322
HF + ML	V3 HOG V3 HOG V3	Adaboost Naive Bayes Decision Tree Adaboost Gradient Boosting Gradient Boosting Naive Bayes KNN Random Forest Linear SVM Extremely Trees	0.5618 0.5577 0.5564 0.5564 0.5537 0.5524 0.5376 0.5376 0.5336 0.5322 0.5309
HF + ML   H HF + ML   H HF + ML   H DL + ML (FT)   I DL + ML (TL)   H HF + ML   H DL + ML (FT)   I DL + ML (TL)   I DL + ML (TL)   I DL + ML (FT)   I DL + ML (TL)   I	V3 HOG V3 HOG V3 HOG	Adaboost Naive Bayes Decision Tree Adaboost Gradient Boosting Gradient Boosting Naive Bayes KNN Random Forest Linear SVM Extremely Trees SGD	0.5618 0.5577 0.5564 0.5564 0.5537 0.5524 0.5376 0.5376 0.5336 0.5322 0.5309 0.5295
HF + ML	V3 HOG V3 HOG V3	Adaboost Naive Bayes Decision Tree Adaboost Gradient Boosting Gradient Boosting Naive Bayes KNN Random Forest Linear SVM Extremely Trees SGD Decision Tree	0.5618 0.5577 0.5564 0.5564 0.5537 0.5524 0.5376 0.5376 0.5336 0.5322 0.5309 0.5295 0.5268
HF + ML	V3 HOG V3 HOG V3 HOG	Adaboost Naive Bayes Decision Tree Adaboost Gradient Boosting Gradient Boosting Naive Bayes KNN Random Forest Linear SVM Extremely Trees SGD	0.5618 0.5577 0.5564 0.5564 0.5537 0.5524 0.5376 0.5376 0.5336 0.5322 0.5309 0.5295

D1 (FT)	V00.40	<b>b</b>	0.7624
DL + ML (FT) HF + ML	VGG 19 Haralick	Random Forest Linear SVM	0.7634 0.76
	VGG 19		
DL + ML (FT)		Extremely Trees	0.7594
DL + ML (FT)		Linear SVM	0.7594
DL + ML (TL)		SVM	0.75
HF + ML	Haralick	SVM	0.75
HF + ML	LPQ	SVM	0.75
HF + ML DL + ML (FT)	LBP + LPQ + GLCM VGG 19	SGD SGD	0.75 0.7459
	RESNET 152		0.7459
DL + ML (TL)		KNN	_
DL + ML (FT)	VGG 19 + RESNET 152 + IV3	KNN	0.74
DL + ML (FT)	VGG 19 + RESNET 152 + IV3	Decision Tree	0.74
HF + ML	LBP	Naive Bayes	0.74
DL + ML (TL) HF + ML	VGG 19 + RESNET 152 + IV3 LBP	Decision Tree SGD	0.73 0.73
		Decision Tree	
HF + ML	LBP + LPQ		0.73
HF + ML	LBP + LPQ + GLCM VGG 19	Decision Tree Gradient Boosting	0.73 0.7271
DL + ML (FT) DL + ML (FT)	VGG 19	Adaboost	0.7271
DL + ML (FI)	RESNET 152		0.7258
		Naive Bayes Decision Tree	0.72
DL + ML (TL)	VGG 19 + RESNET 152		
HF + ML	LPQ	SGD	0.72
DL + ML (FT)	VGG 19 + RESNET 152	Decision Tree	0.71
HF + ML	Haralick	Naive Bayes	0.7
HF + ML	Haralick	Adaboost	0.7
HF + ML	Haralick	Gradient Boosting	0.7
HF + ML	Haralick	Random Forest	0.7
HF + ML	Haralick	Extremely Trees	0.7
HF + ML	LBP	Decision Tree	0.7
DL + ML (FT)	VGG 19	KNN Decision Tree	0.6962
HF + ML	LPQ	Decision Tree	0.69
HF + ML	Haralick	SGD	0.68
DL + ML (FT)	VGG 19	Decision Tree	0.6747
DL + ML (FT)	RESNET 152	Naive Bayes	0.67
DL + ML (FT)	RESNET 152	Decision Tree	0.67
DL + ML (FT)	VGG 19	Naive Bayes	0.668
HF + ML	LBP + LPQ + GLCM	KNN	0.66
DL + ML (FT)	VGG 19	SVM	0.6572
DL + ML	VGG 19	Decision Tree	0.65
DL + ML (TL)	RESNET 152	Decision Tree	0.65
HF + ML	Haralick	KNN	0.64
DL + ML (FT)	VGG 19 + RESNET 152	SGD	0.61
HF + ML	SIFT	Gradient Boosting	0.61
HF + ML	SIFT	Extremely Trees	0.61
HF + ML	Haralick	Decision Tree	0.61
DL + ML (FT)	VGG 19 + RESNET 152 + IV3	Naive Bayes	0.6
HF + ML	HOG	KNN	0.6
DL + ML (FT)	VGG 19 + RESNET 152	Naive Bayes	0.59
HF + ML	SIFT	Adaboost	0.59
HF + ML	SIFT	Random Forest	0.59
DL + ML (FT)	IV3	Random Forest	0.58
DL + ML (FT)	IV3	Extremely Trees	0.58
HF + ML	HOG	SGD	0.58
HF + ML	HOG	Gradient Boosting	0.58
HF + ML	SIFT	KNN	0.58
HF + ML	LBP + LPQ + GLCM	Naive Bayes	0.58
DL + ML (TL)	IV3	Naive Bayes	0.57
DL + ML (TL)	IV3	Adaboost	0.57
DL + ML (TL)	IV3	Linear SVM	0.57
DL + ML (TL)	IV3	SVM	0.57
DL + ML (FT)	IV3	Adaboost	0.57
DL + ML (FT)	IV3	Gradient Boosting	0.56
HF + ML	HOG	Adaboost	0.56
HF + ML	HOG	Random Forest	0.56
HF + ML	HOG	Extremely Trees	0.56
HF + ML	HOG	Linear SVM	0.56
HF + ML	LBP + LPQ	Naive Bayes	0.56
DL + ML (TL)	IV3	SGD	0.55
DL + ML (TL)	IV3	Random Forest	0.55
DL + ML (TL)	IV3	Extremely Trees	0.55
DL + ML (FT)	IV3	KNN	0.54
HF + ML	SIFT	SGD	0.54
DL + ML (TL)	IV3	Decision Tree	0.53
DL + ML (TL)	IV3	Gradient Boosting	0.53
DL + ML (FT)	IV3	SVM	0.53
DL + ML (FT)	VGG 19 + RESNET 152	SVM	0.53
DL + ML (FT)	VGG 19 + RESNET 152 + IV3	SGD	0.53
HF + ML	HOG	Naive Bayes	0.53
HF + ML	HOG	SVM	0.53
HF + ML	SIFT	Decision Tree	0.53
HF + ML	LPQ	Naive Bayes	0.53
DL + ML (TL)	IV3	KNN	0.52
DL + ML (FT)	IV3	Decision Tree	0.52

HF + ML	SIFT	Naive Bayes	0.5174
HF + ML	LBP	Naive Bayes	0.5147
HF + ML	SIFT	SGD	0.4663
DL + ML (FT)	IV3	Naive Bayes	0.4462
HF + ML	LBP	SGD	0.422
HF + ML	HOG	KNN	0.4045
HF + ML	LBP + LPQ	SGD	0.3803
HF + ML	LPQ	SGD	0.36

DL + ML (FT)	IV3	Linear SVM	0.51
HF + ML	HOG	Decision Tree	0.51
HF + ML	SIFT	Naive Bayes	0.51
HF + ML	SIFT	Linear SVM	0.51
HF + ML	SIFT	SVM	0.51
DL + ML (FT)	IV3	SGD	0.5
DL + ML (FT)	VGG 19 + RESNET 152 + IV3	SVM	0.47
DL + ML (FT)	IV3	Naive Bayes	0.39