GOOGLE STREET VIEW
HOUSE NUMBER CLASSIFICATION

BRYANT BIGGS

5TH AUGUST 2016

DATASET

32 x 32 Cropped Digits

Original Full Images
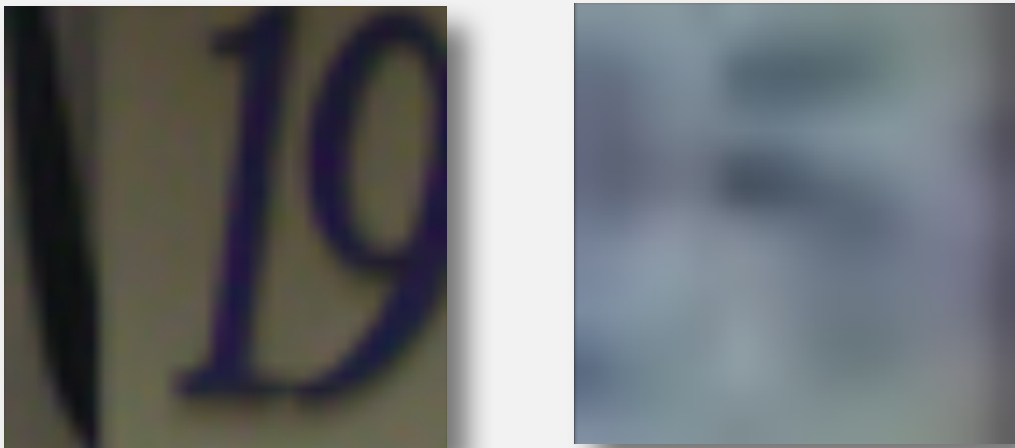
	Available	Used
Test	73,257	7,326
Train	26,032	2,603
Extra	531,131	0

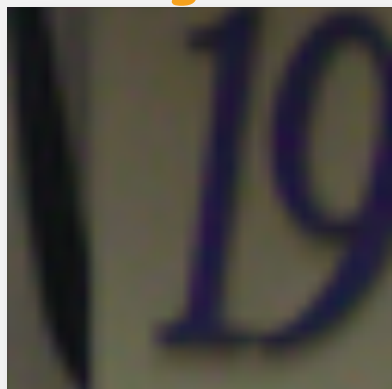**10 Classes: 0-9**

Frequency Distribution of Class Labels
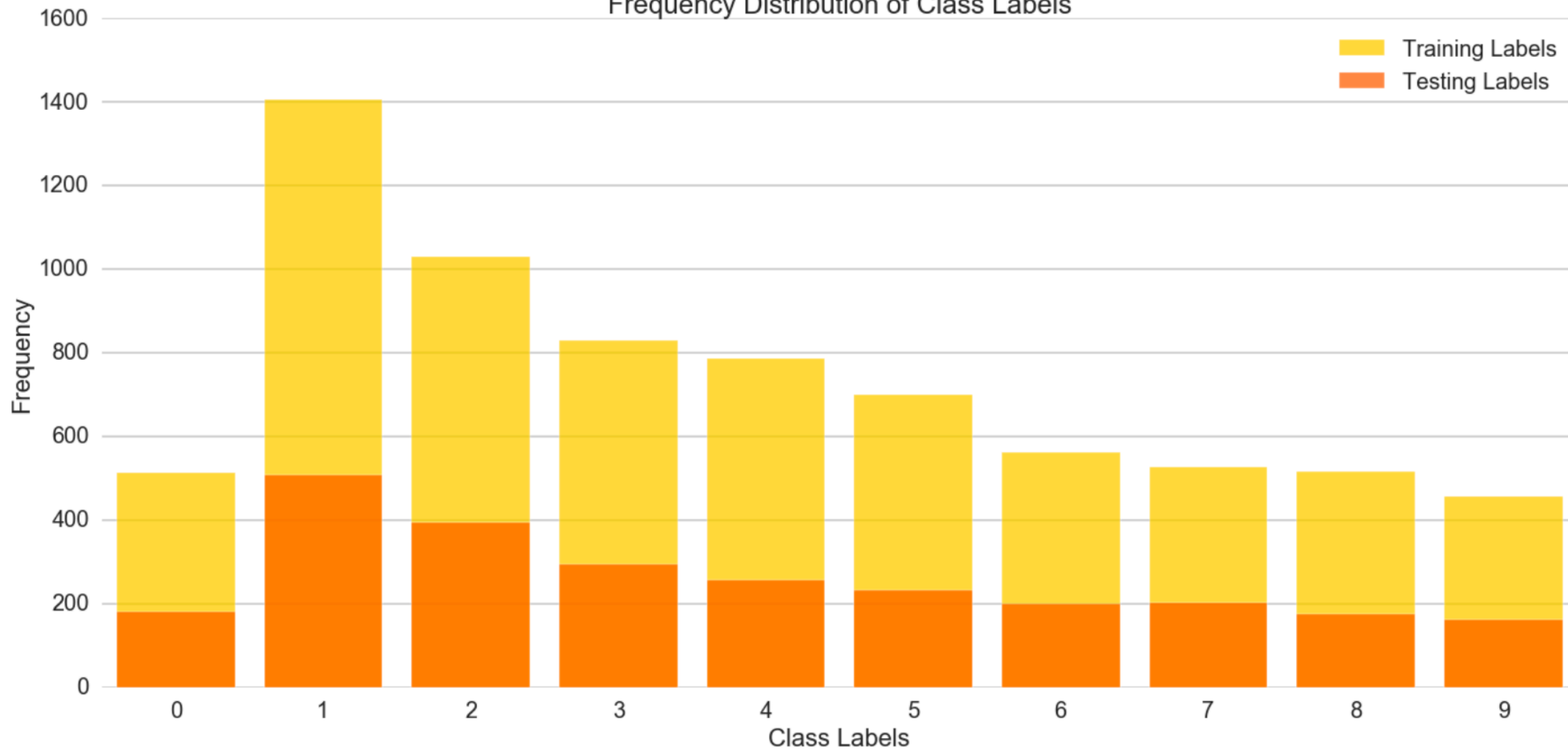
PREPROCESS

Original | PCA | Custom | Otsu's | AMT | AGT
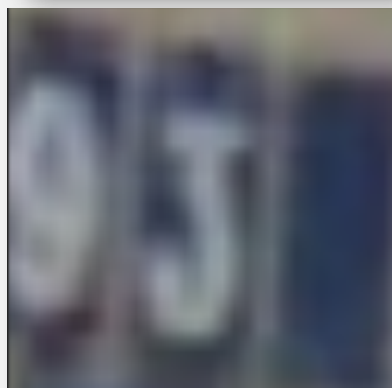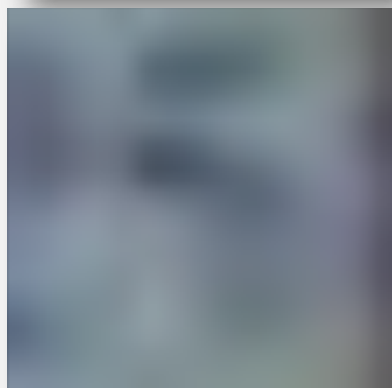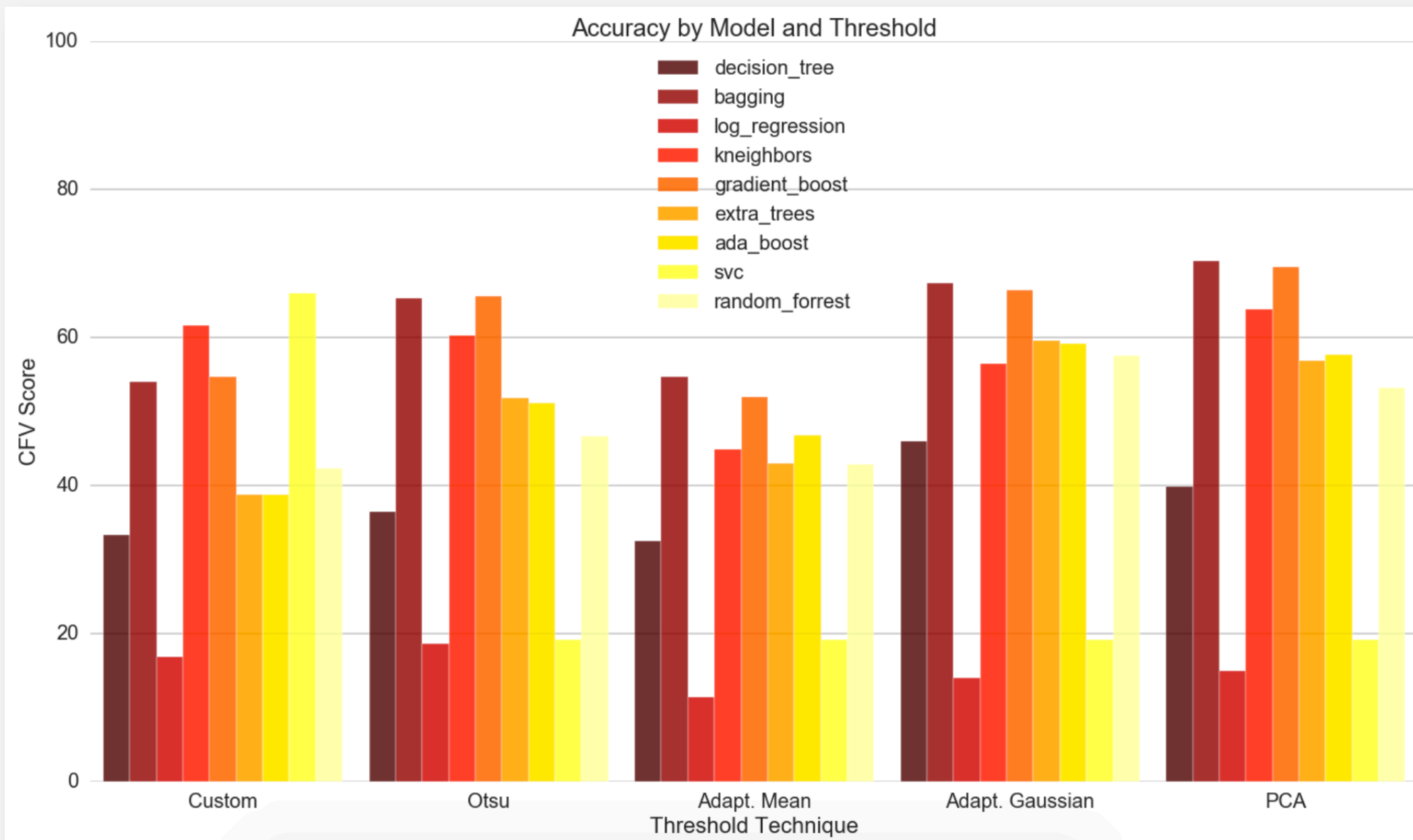
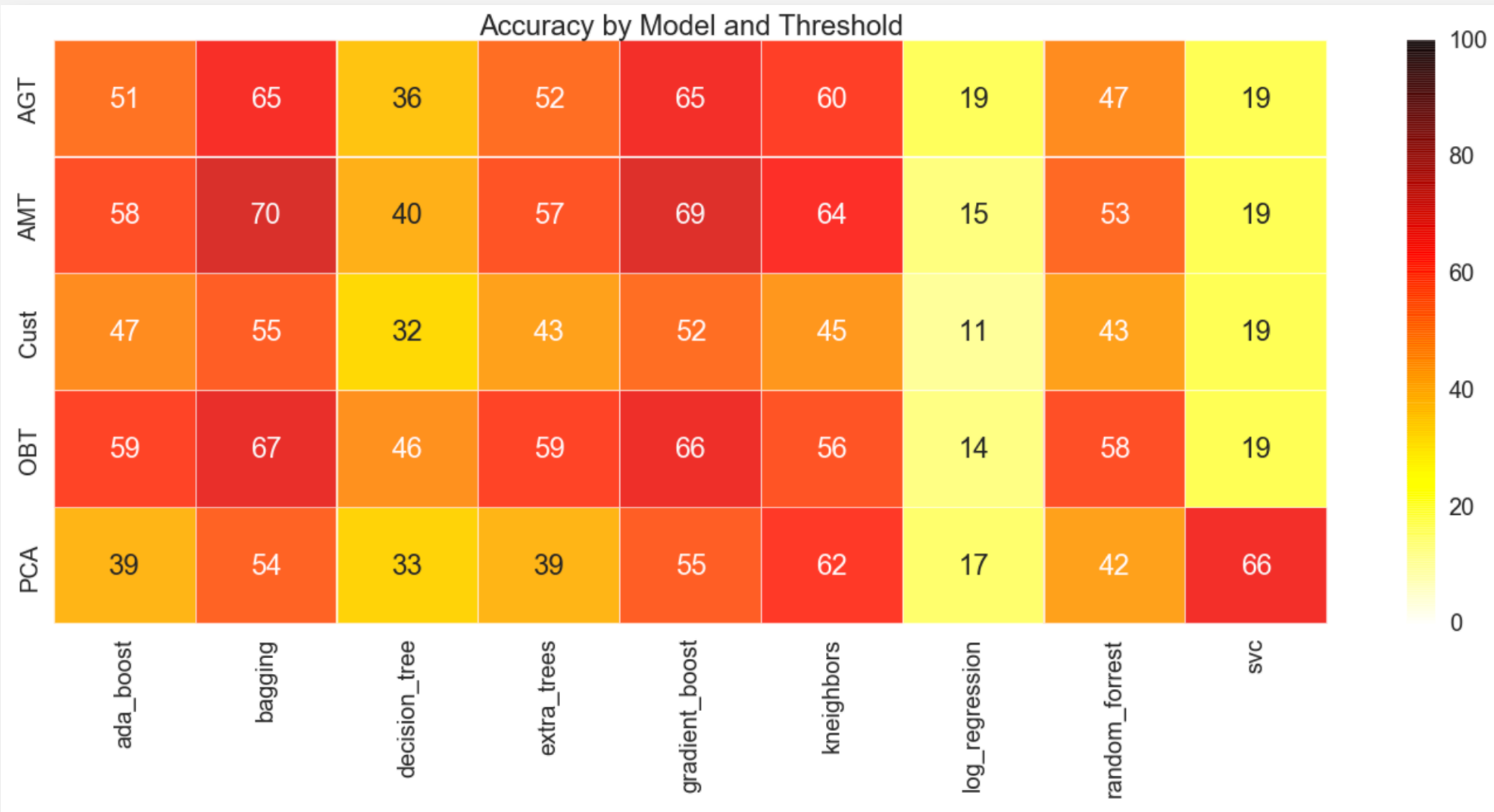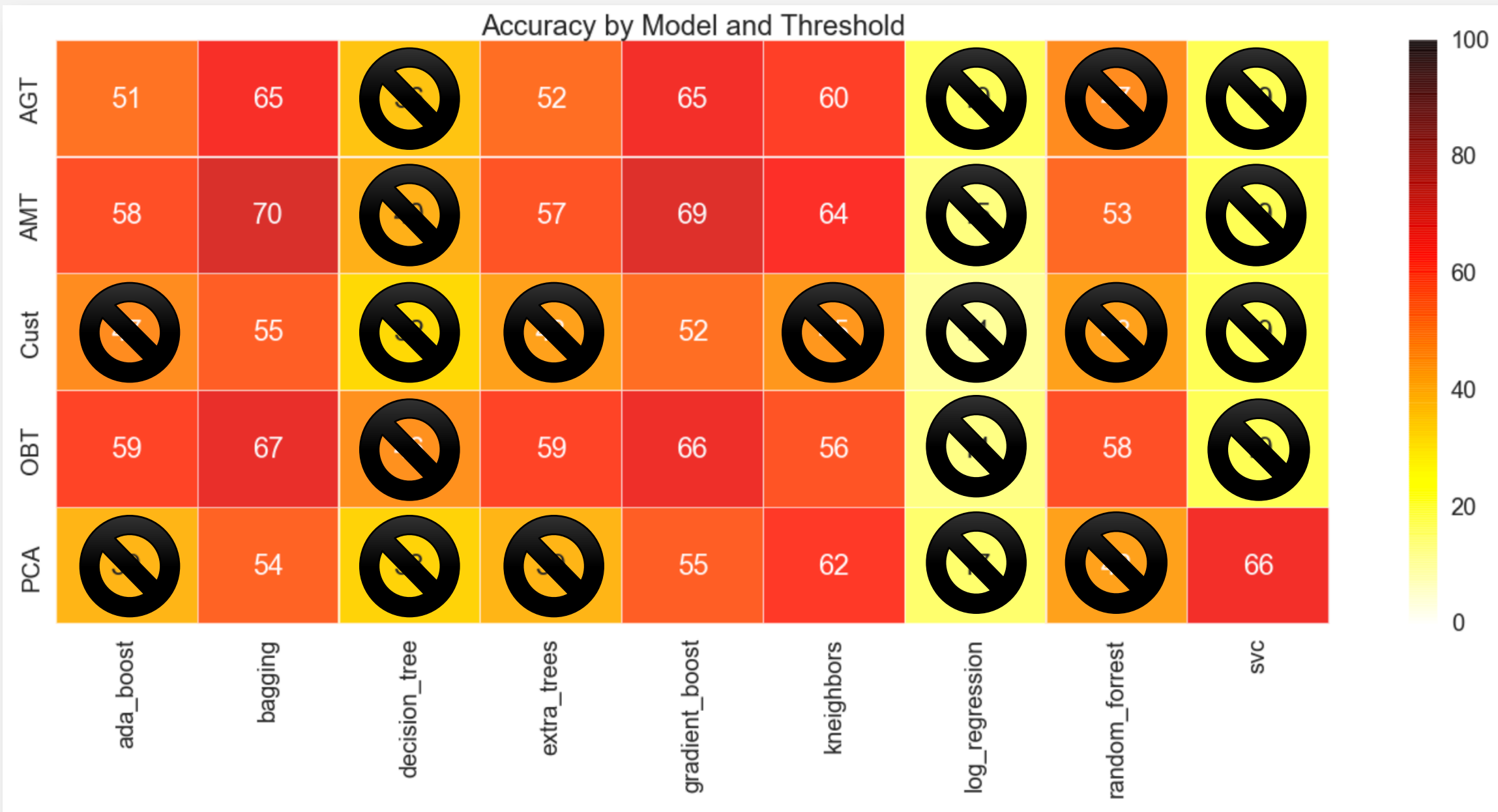Accuracy by Model and Threshold

Accuracy by Model and Threshold

Accuracy by Model and Threshold

RELEVANT FEATURES
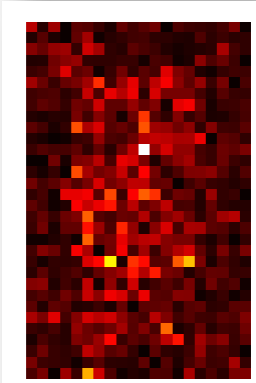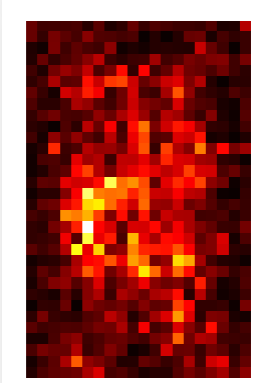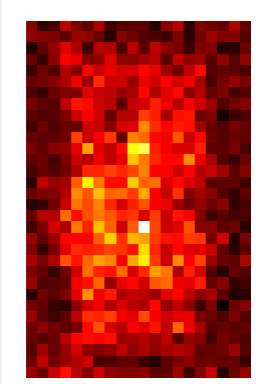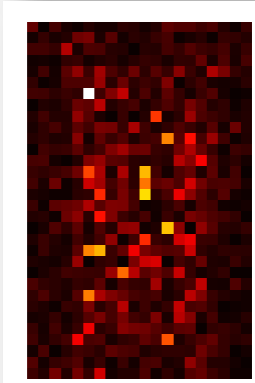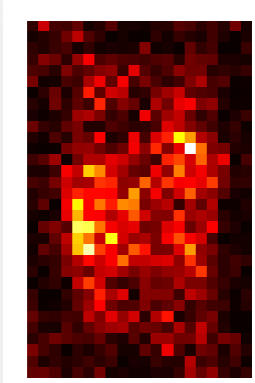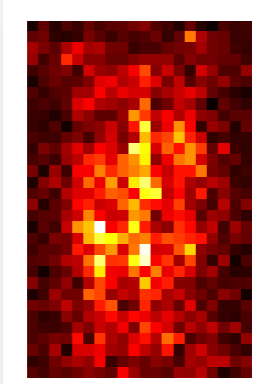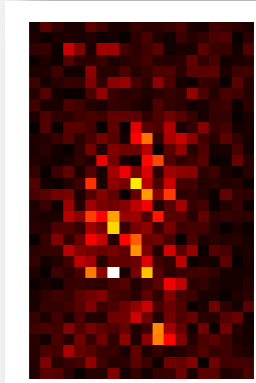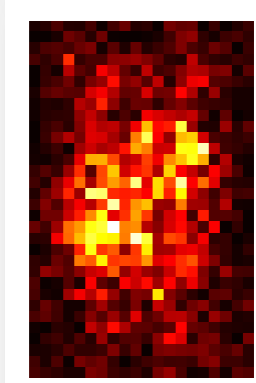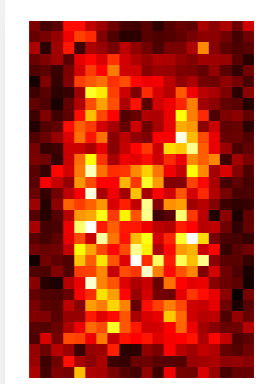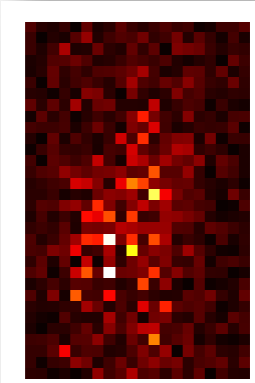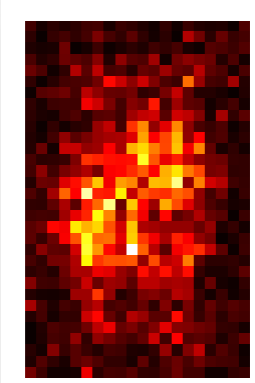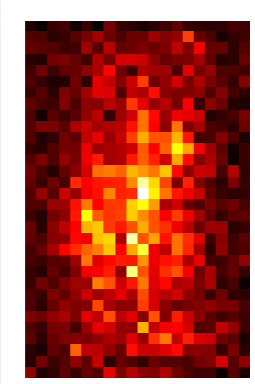
GRADIENT BOOSTING CLASSIFER
USING ADAPTIVE MEANS THRESHOLDING

Labels	Precision	Recall	f1-score
0	0.75	0.66	0.70
1	0.78	0.87	0.82
2	0.72	0.85	0.78
3	0.61	0.63	0.62
4	0.73	0.72	0.73
5	0.67	0.72	0.69
6	0.63	0.59	0.61
7	0.79	0.68	0.73
8	0.77	0.51	0.61
9	0.73	0.58	0.65
Avg.	0.72	0.72	0.72

THANK YOU

TOP TEN

	Model	Accuracy
1	gradient_boost_AMT	0.719939
2	extra_trees_AMT	0.711103
3	bagging_AMT	0.699193
4	gradient_boost_AGT	0.689589
5	random_forrest_AMT	0.683826
6	extra_trees_AGT	0.678448
7	ada_boost_AMT	0.667307
8	bagging_AGT	0.657703
9	ada_boost_OBT	0.656166
10	gradient_boost_OBT	0.651556