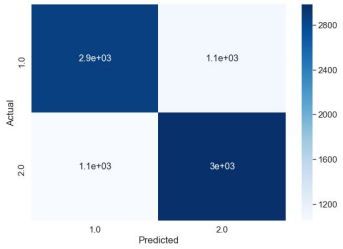
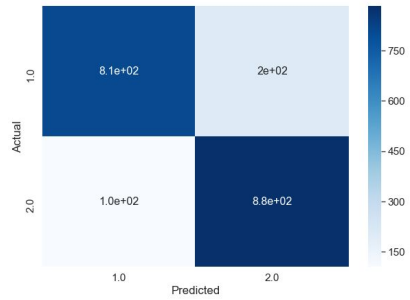
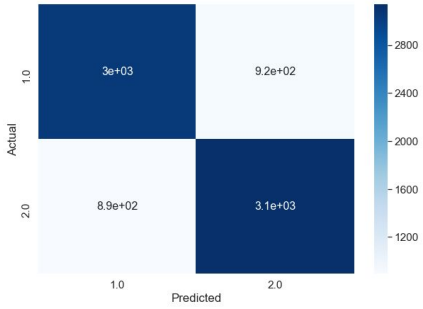
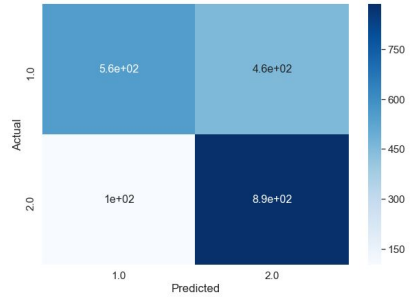
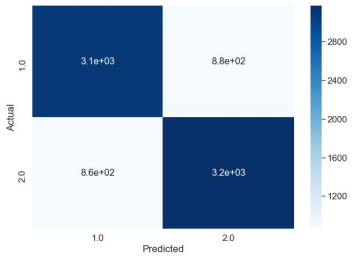
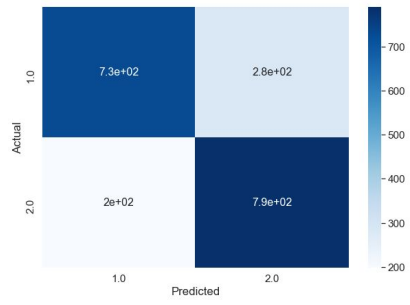
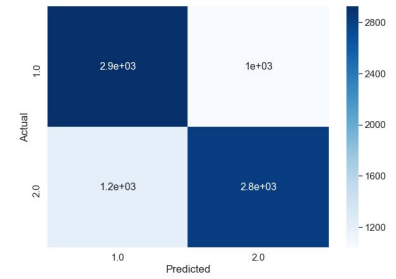
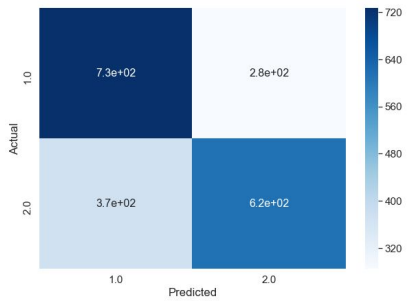
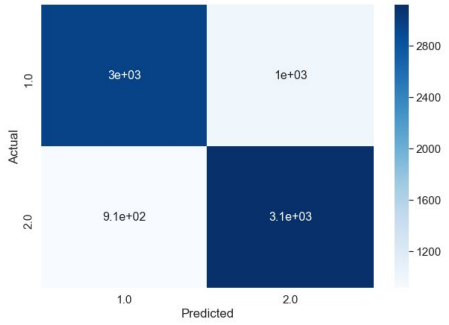
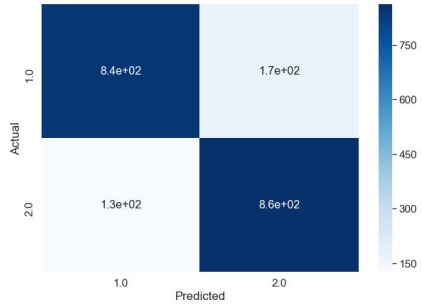
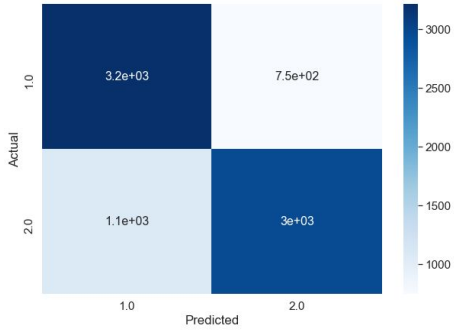
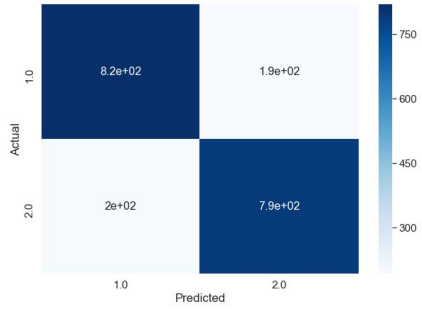
RL_Project_Results

Using cifar 10 Accuracy and Confusion Matrix

Classifier	Accuracy(Oversampling)	Accuracy(Undersampling)
GB	73.16 	84.6 
SVM	77.33 	72.05 
Logistic	78.225 	75.9 
Random Forest	71.775	67.15

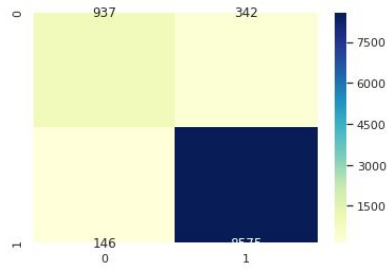
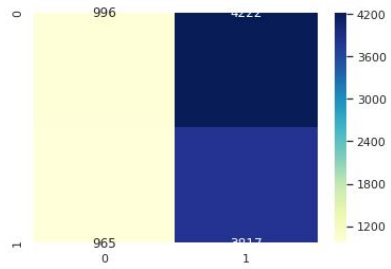
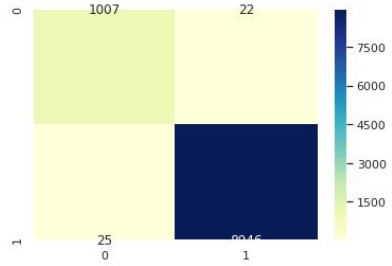
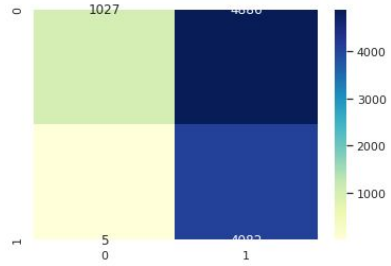
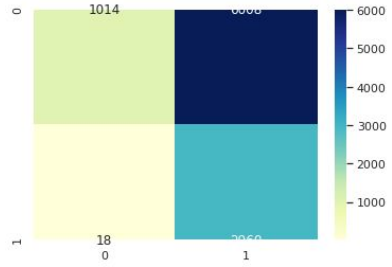
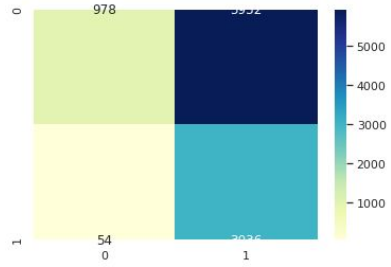
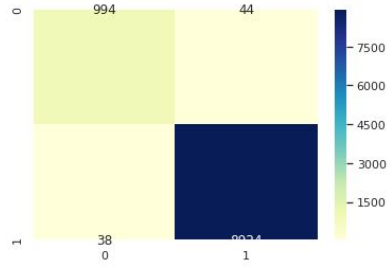
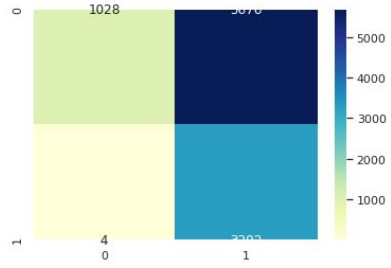
		

Ensemble Learning (Boosting and Bagging)

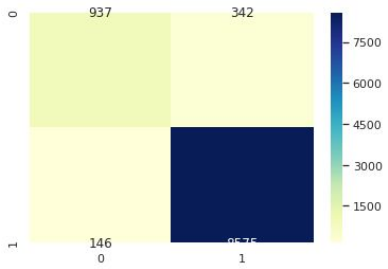
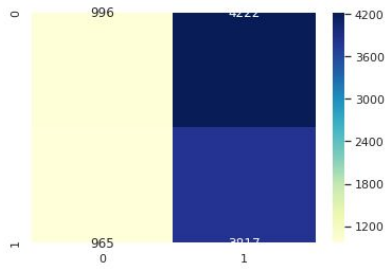
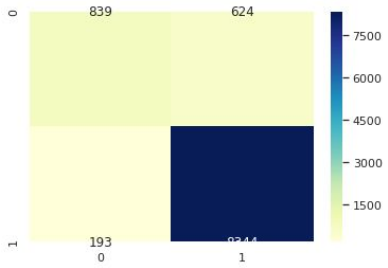
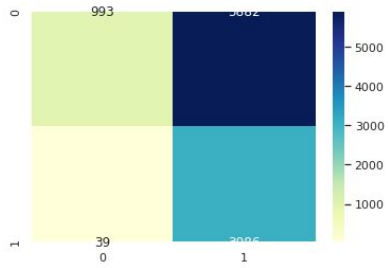
Method	Accuracy(Oversampling)	Accuracy(Undersampling)
Boosting	76.1 	85.1 
Bagging	77.225 	80.45 

MNIST

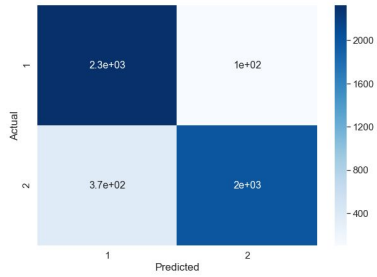
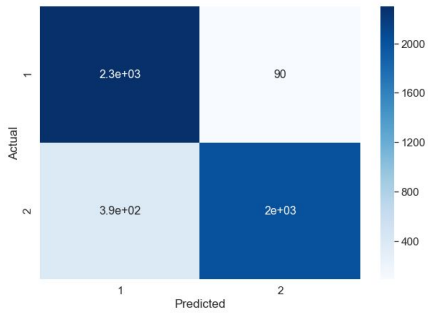
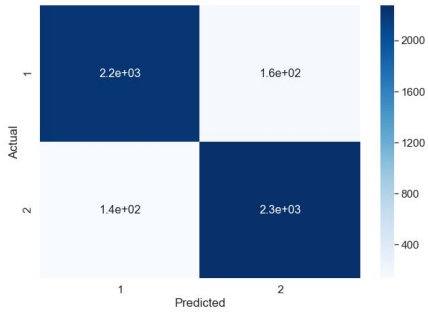
Classifier	OverSampling	UnderSampling
Logistic Regression	95.27	48.13

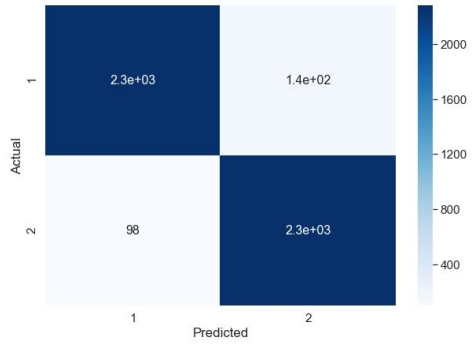
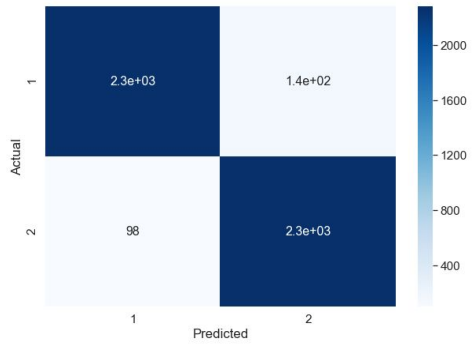
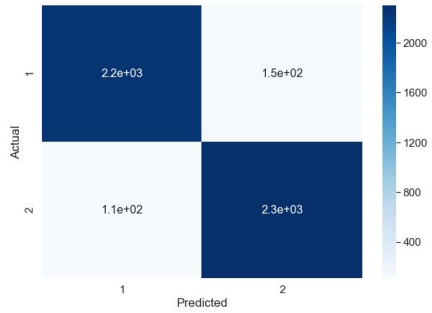
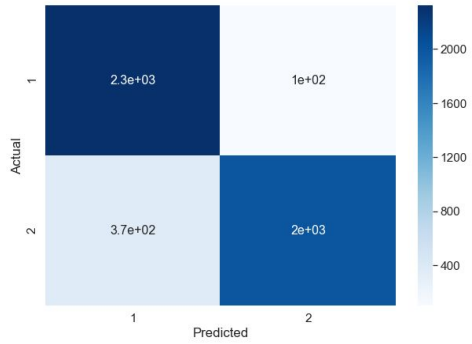
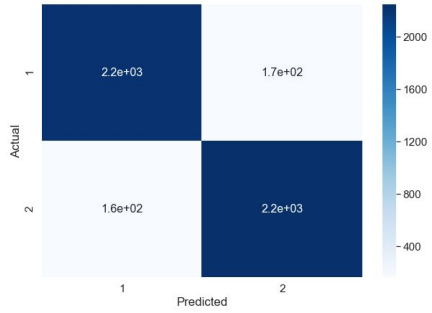
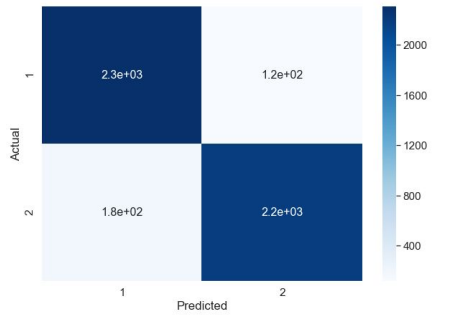
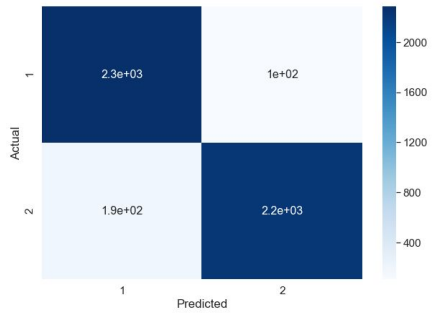
		
SVM	**99.5** 	**51** 
Naive Bayes	**40.3** 	**40.1** 
Random Forest	**99.1** 	**43** 

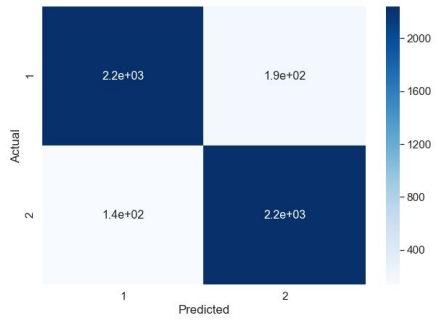
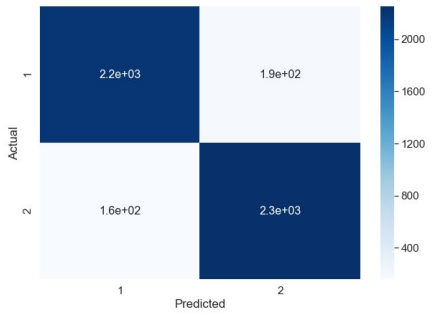
	OverSampling	**UnderSampling**
Bagging	**90.4**	**42.7**

		
Boosting	**91.8** 	**40.7** 

FMNIST

Methods	**Accuracy(Oversampling)**	**Accuracy(Undersampling)**
GB	**90.125** 	**90.02** 
SVM	**93.375**	**93.79** 

		
Logistic	**95.02** 	**94.72** 
Random Forest	**92.75** 	**93.125** 
Bagging	**93.75** 	**93.89** 

Boosting	**93.2** 	**92.8** 

Dataset	Imbalance Ratio	DQNimb	DNN	Oversampling	Undersampling
Cifar10(1)	4%	0.932	0.815	0.7821	0.8464
	1%	0.899	0.718	0.7353	0.8287
FMNIST(1)	4%	0.964	0.903	0.9508	0.9455
	1%	0.938	0.851	0.9388	0.9199
MNIST	1%	0.989	0.955	0.9841	0.7241
	0.1%	0.955	0.843	0.9110	0.6589