

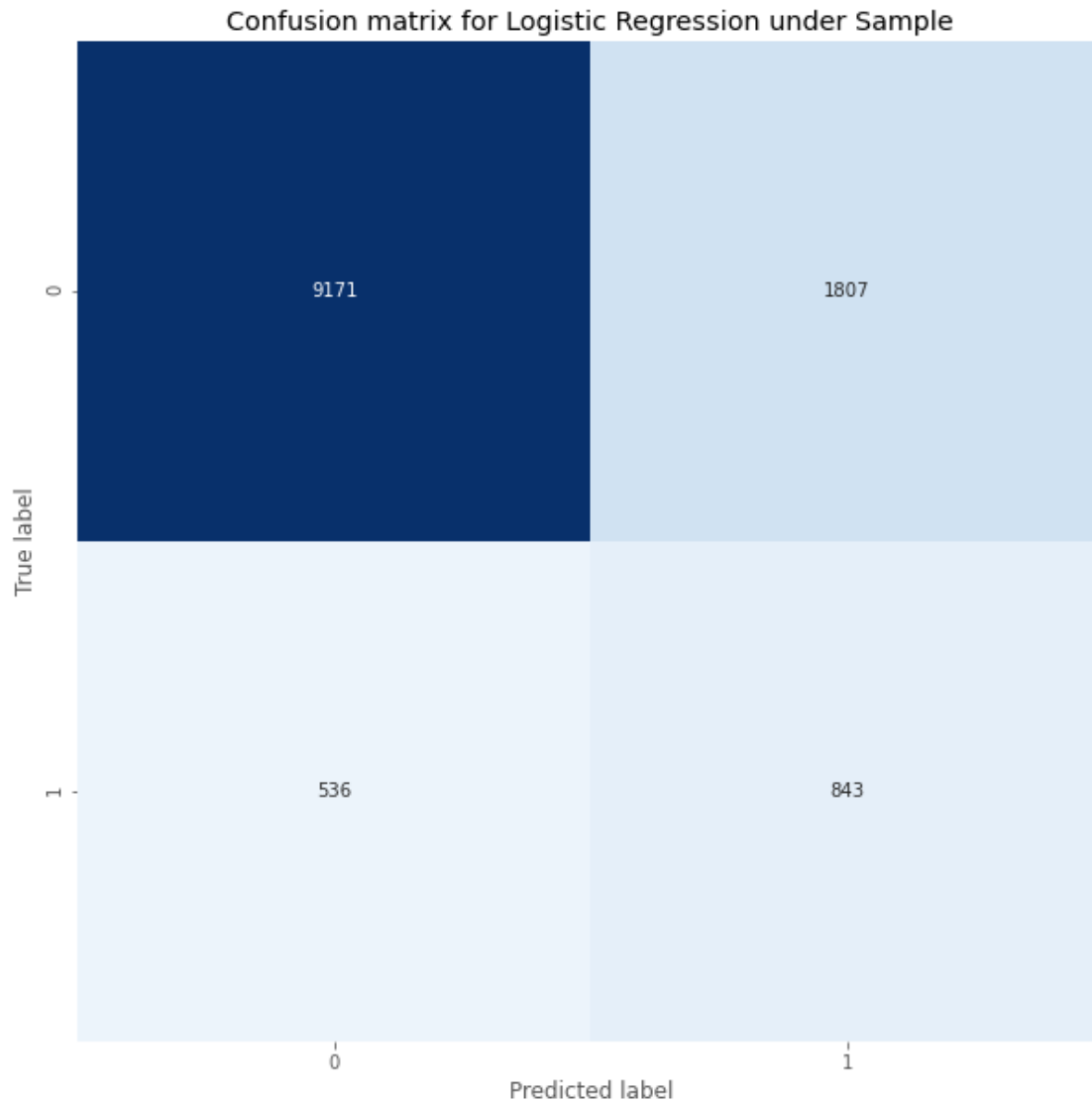
# Confusion matrix appendix

February 10, 2021

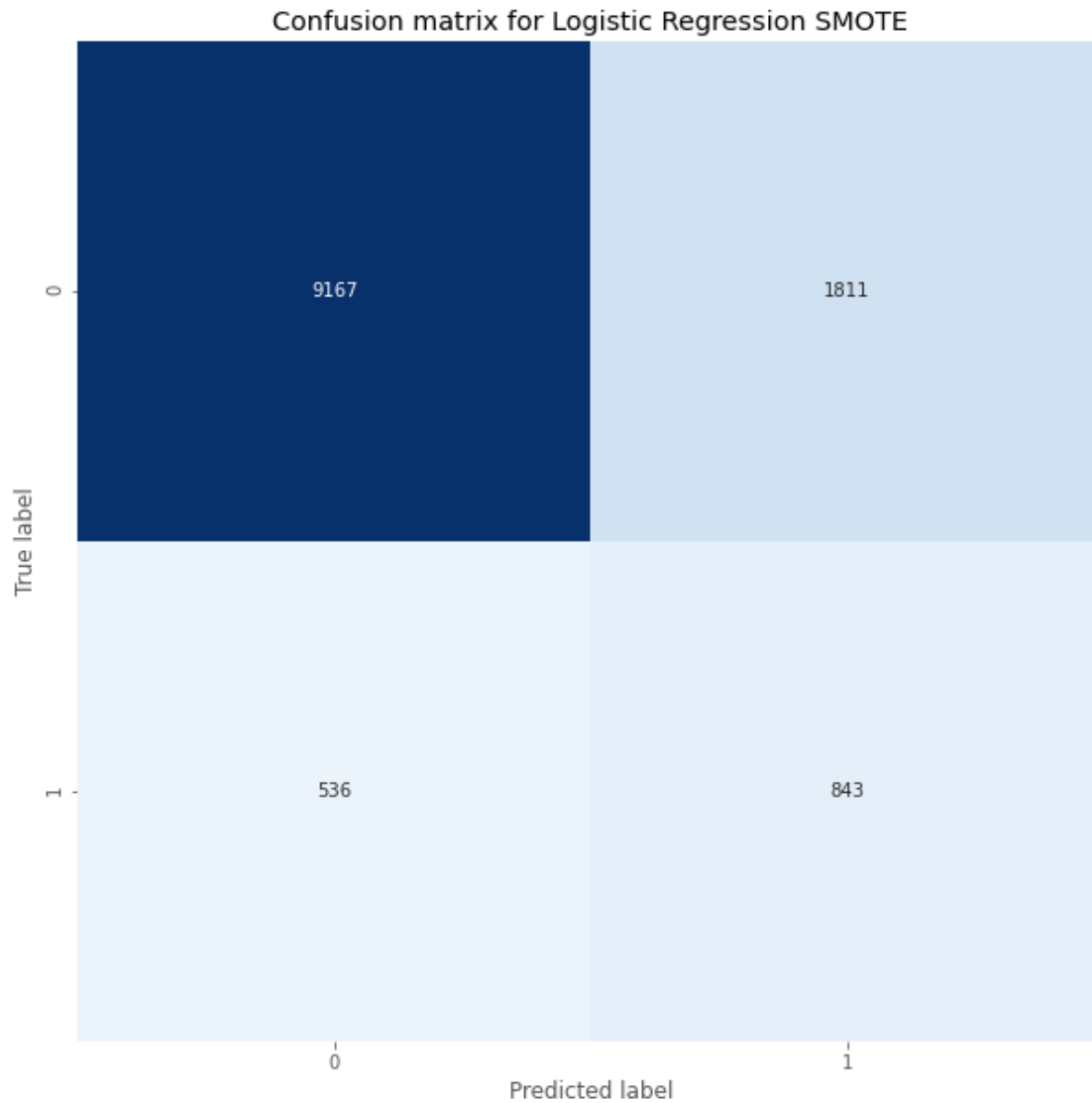
## 1 Confusion matrix appendix

In this file we can see a list of the remaining confusion matrix from raport (analysis)  
*Bank\_Marketing\_Raport.pdf*

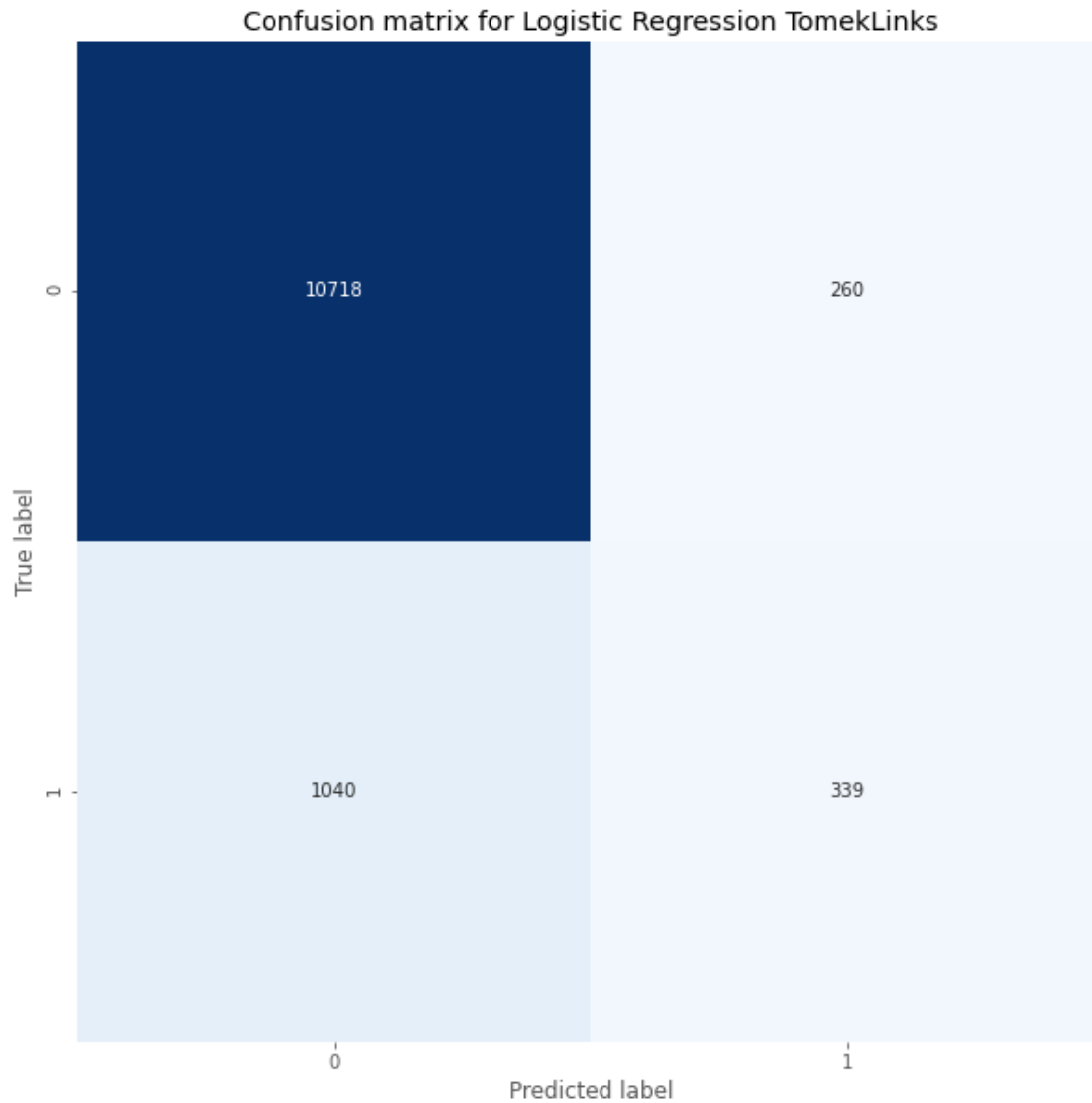
Results for Logistic Regression under Sample:  
Logistic Regression under Sample accuracy: 0.8104  
Logistic Regression under Sample f-score: 0.4185  
Logistic Regression under Sample recall: 0.6113  
Logistic Regression under Sample log\_loss: 0.5306



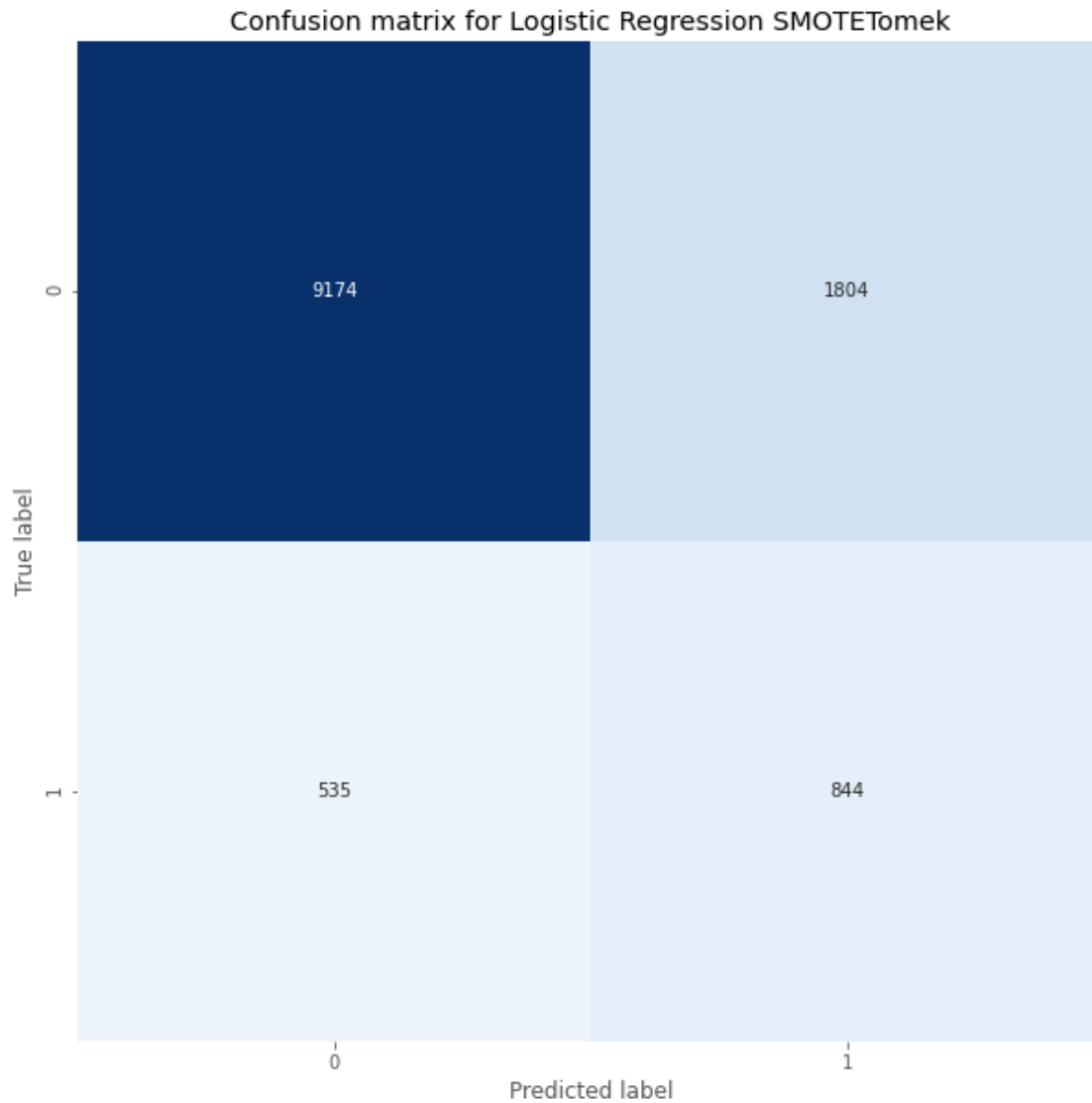
Results for Logistic Regression SMOTE:  
Logistic Regression SMOTE accuracy: 0.8101  
Logistic Regression SMOTE f-score: 0.4181  
Logistic Regression SMOTE recall: 0.6113  
Logistic Regression SMOTE log\_loss: 0.5293



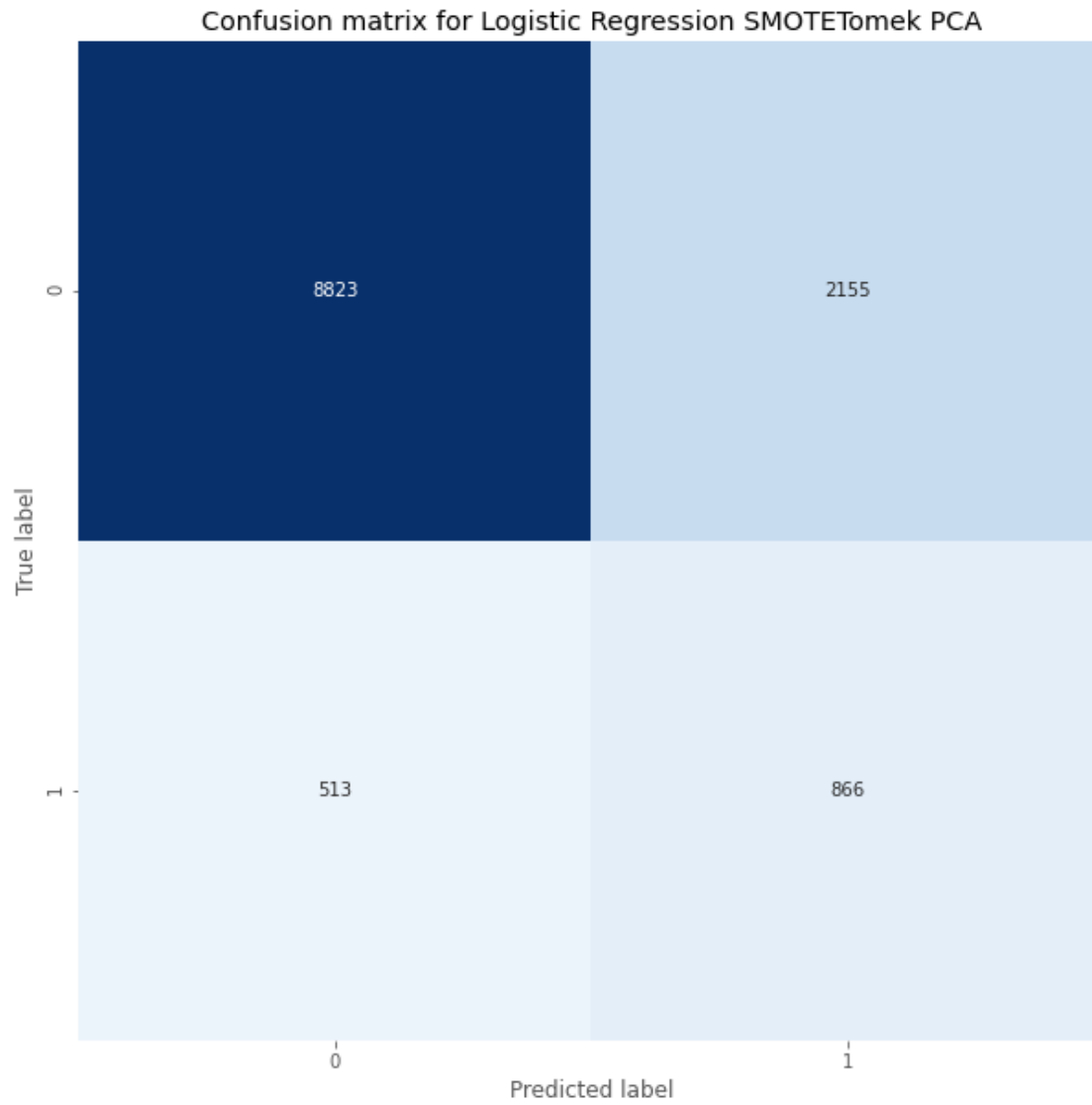
Results for Logistic Regression TomekLinks:  
Logistic Regression TomekLinks accuracy: 0.8948  
Logistic Regression TomekLinks f-score: 0.3428  
Logistic Regression TomekLinks recall: 0.2458  
Logistic Regression TomekLinks log\_loss: 0.286



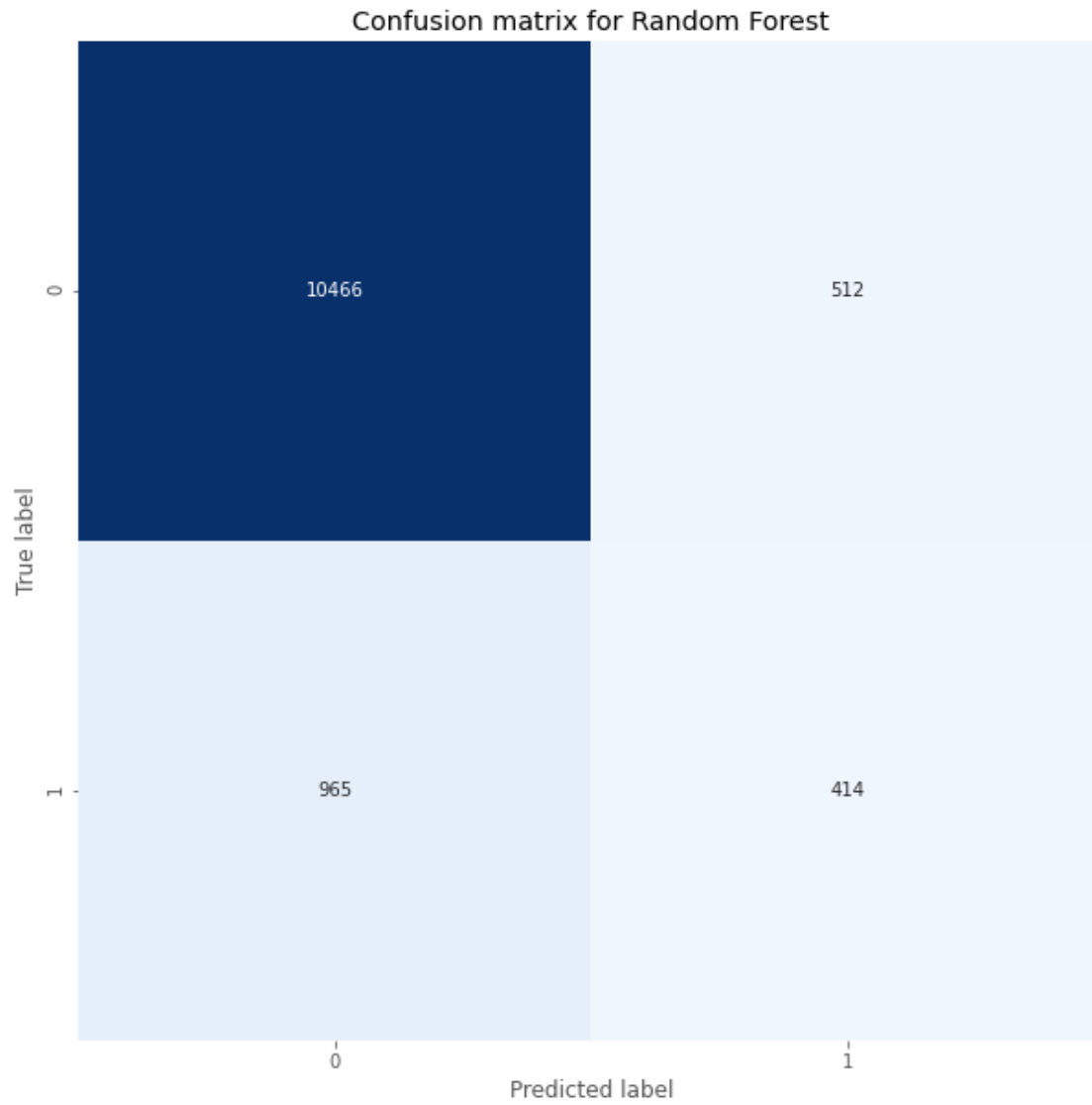
Results for Logistic Regression SMOTETomek:  
Logistic Regression SMOTETomek accuracy: 0.8107  
Logistic Regression SMOTETomek f-score: 0.4192  
Logistic Regression SMOTETomek recall: 0.612  
Logistic Regression SMOTETomek log\_loss: 0.53



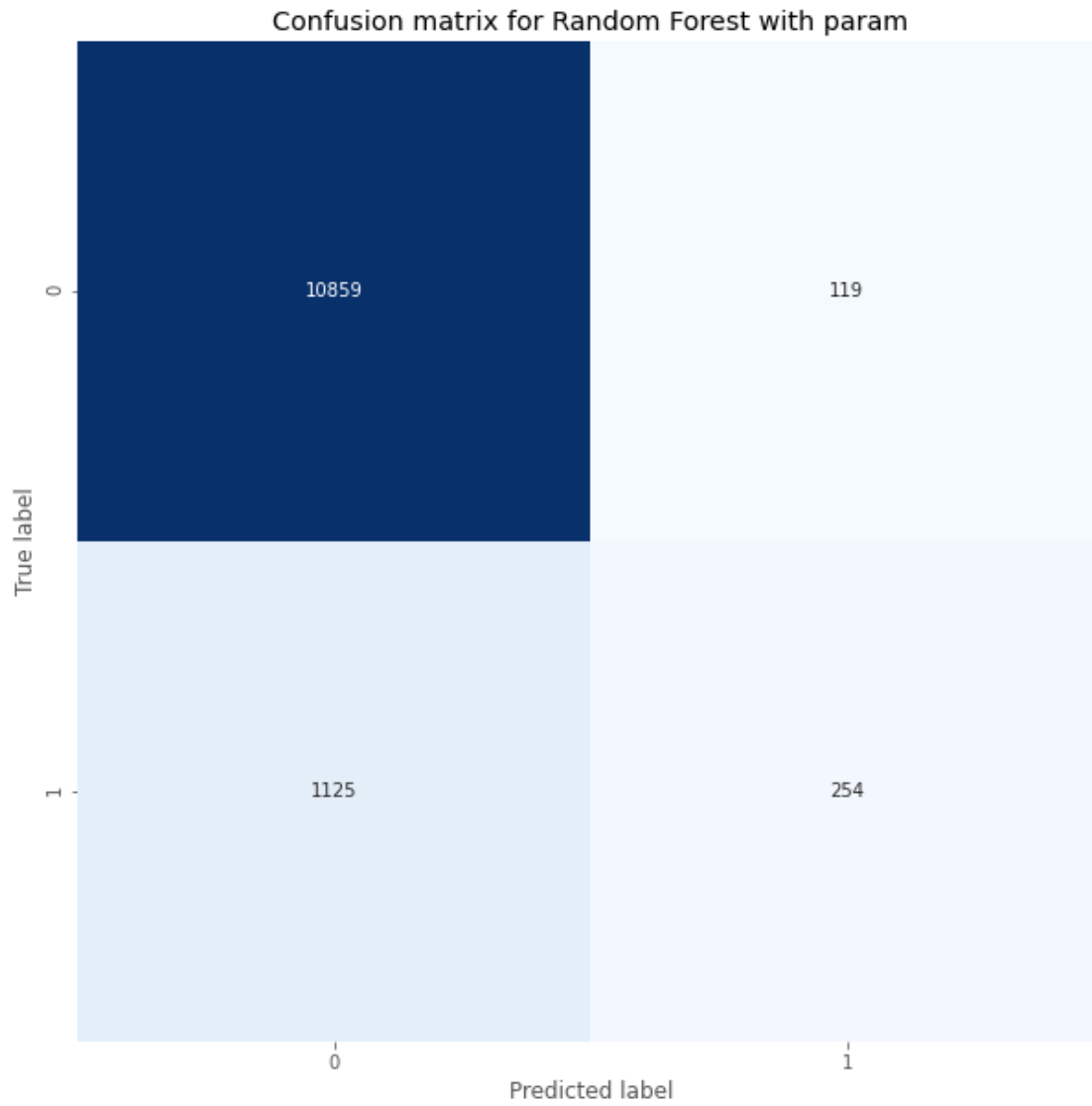
Results for Logistic Regression SMOTETomek PCA:  
Logistic Regression SMOTETomek PCA accuracy: 0.7841  
Logistic Regression SMOTETomek PCA f-score: 0.3936  
Logistic Regression SMOTETomek PCA recall: 0.628  
Logistic Regression SMOTETomek PCA log\_loss: 0.5618



Results for Random Forest:  
Random Forest accuracy: 0.8805  
Random Forest f-score: 0.3592  
Random Forest recall: 0.3002  
Random Forest log\_loss: 1.0429

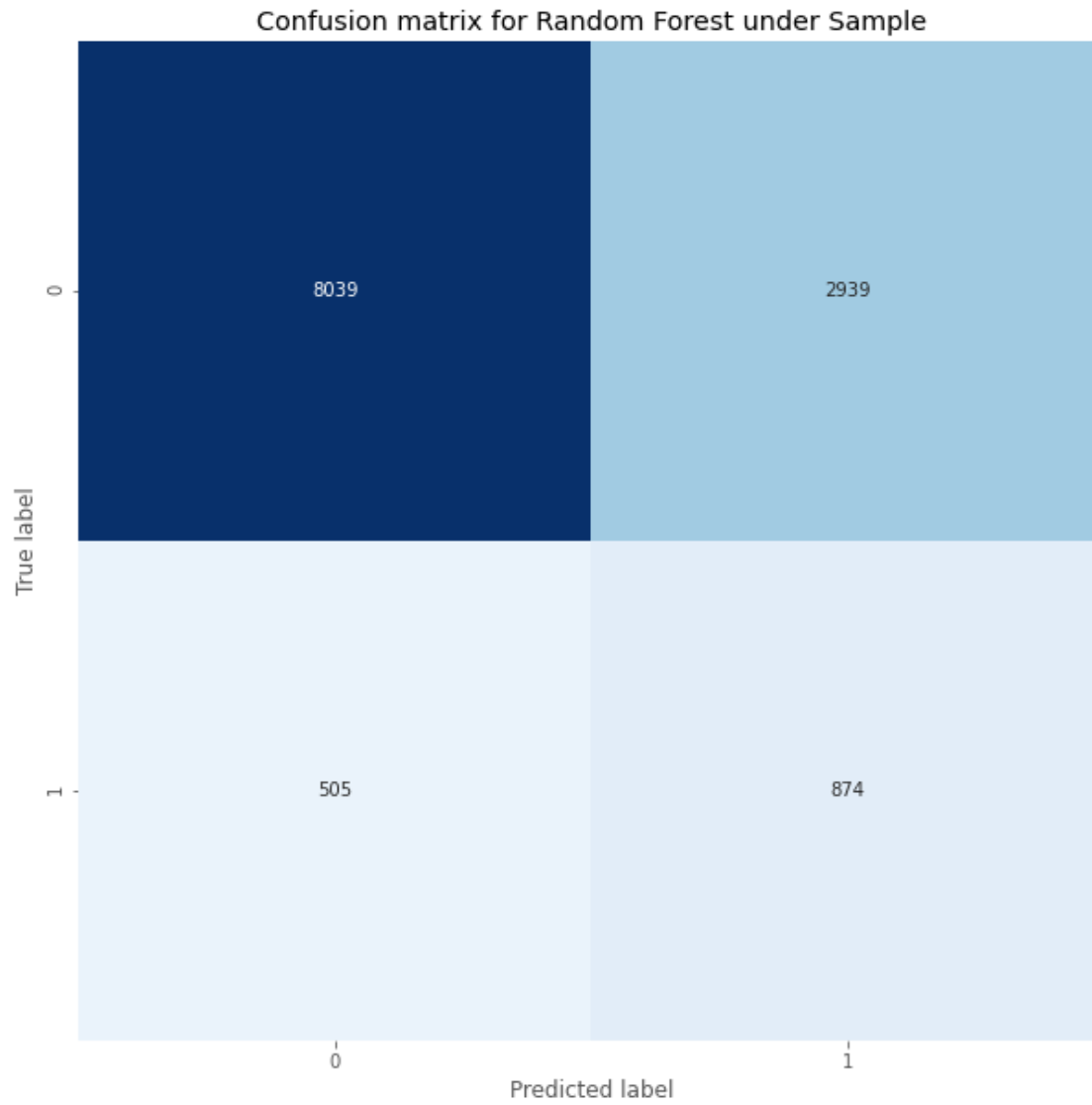


Results for Random Forest with param:  
Random Forest with param accuracy: 0.8993  
Random Forest with param f-score: 0.29  
Random Forest with param recall: 0.1842  
Random Forest with param log\_loss: 0.2796

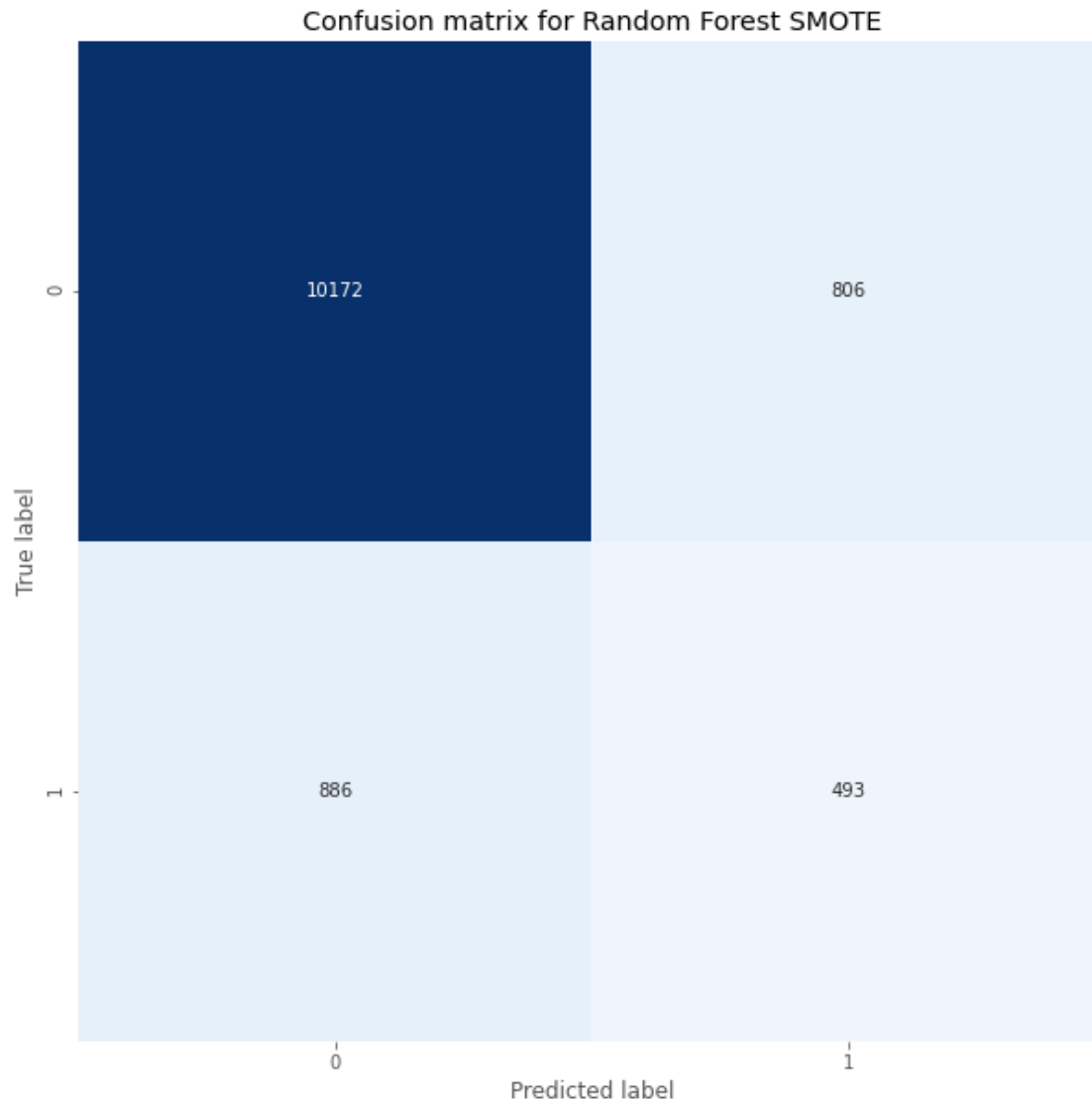


Results for Random Forest under Sample:  
Random Forest under Sample accuracy: 0.7213  
Random Forest under Sample f-score: 0.3367  
Random Forest under Sample recall: 0.6338  
Random Forest under Sample log\_loss: 1.9856

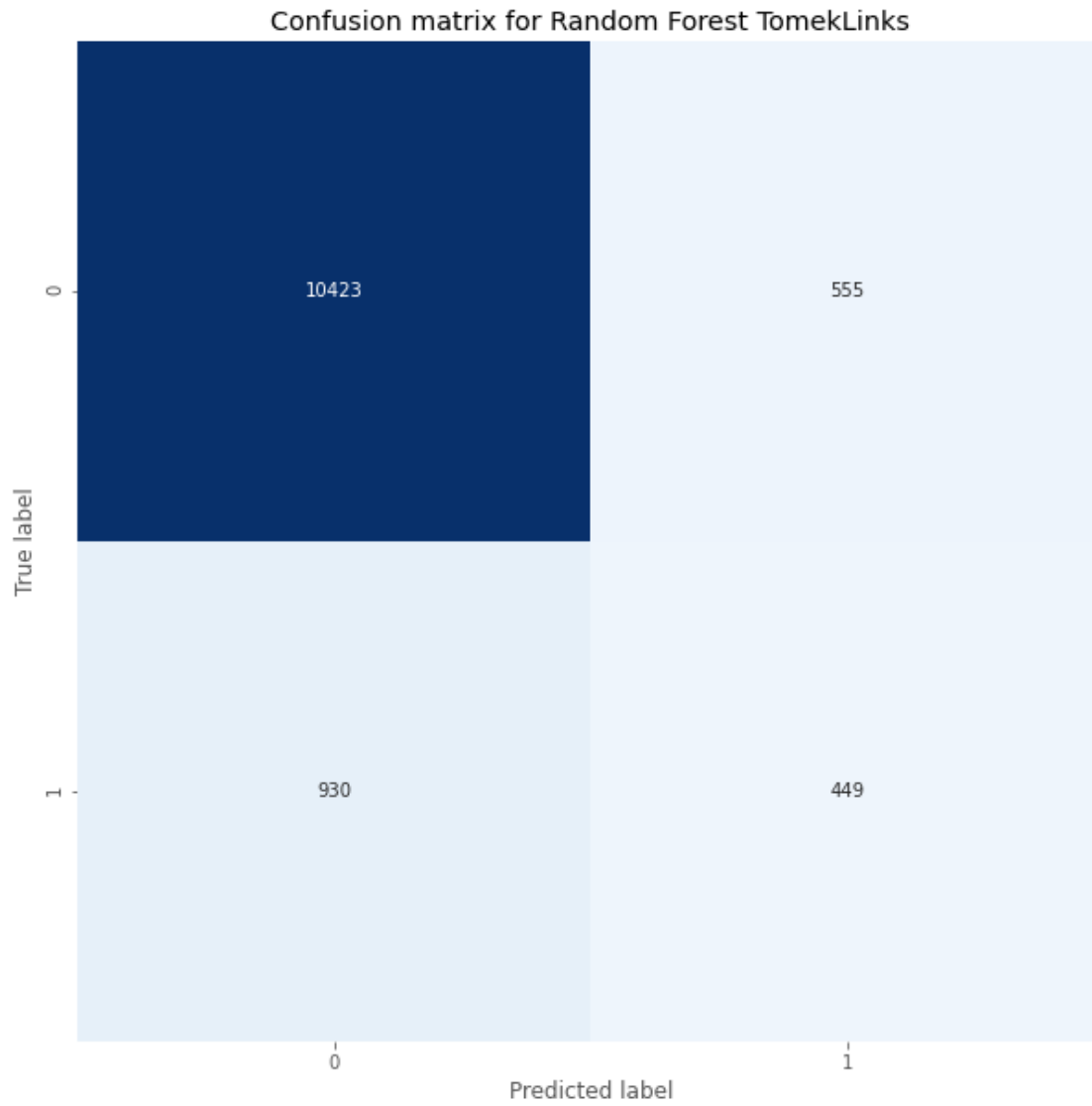




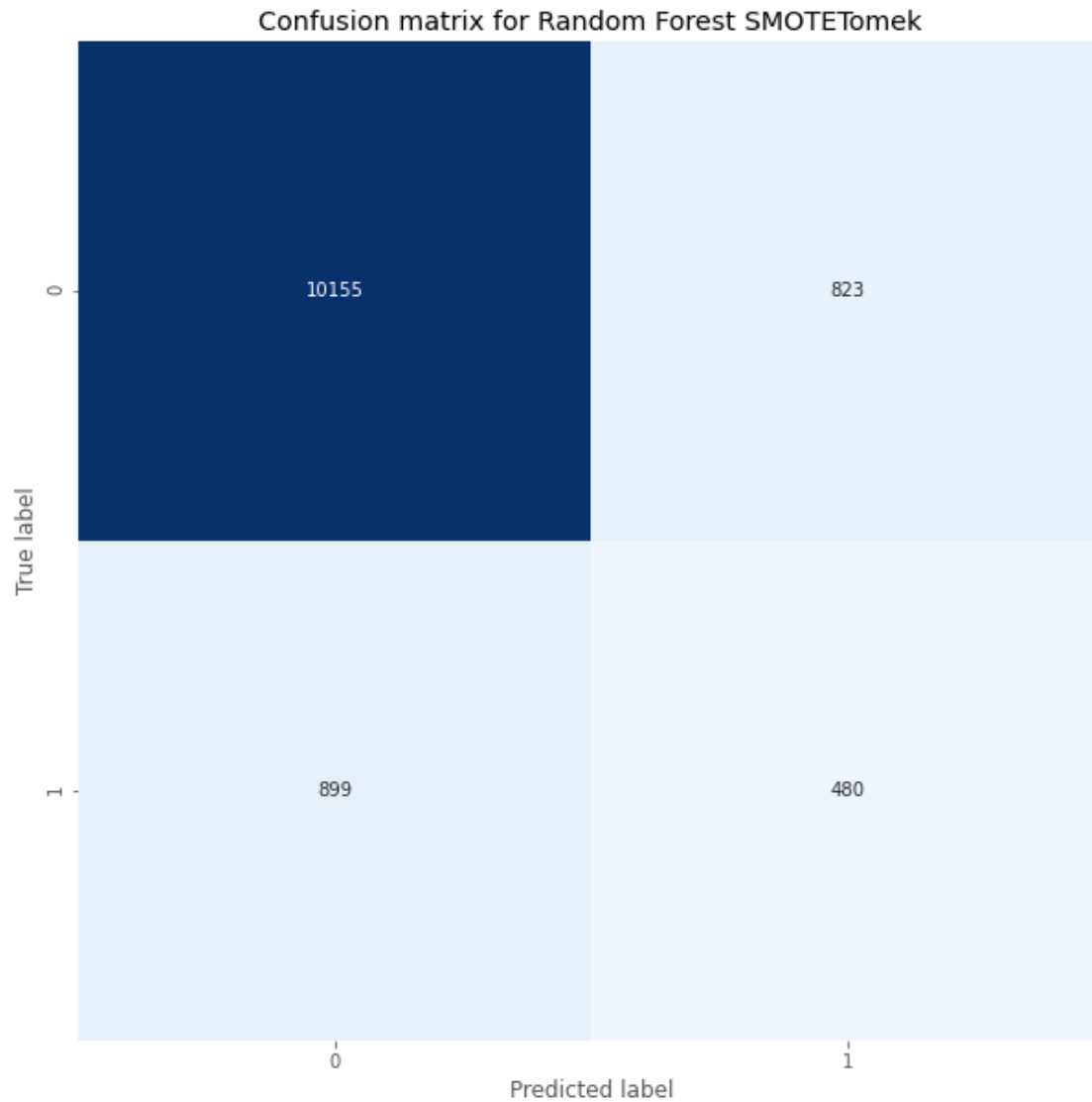
Results for Random Forest SMOTE:  
Random Forest SMOTE accuracy: 0.8631  
Random Forest SMOTE f-score: 0.3682  
Random Forest SMOTE recall: 0.3575  
Random Forest SMOTE log\_loss: 1.6816



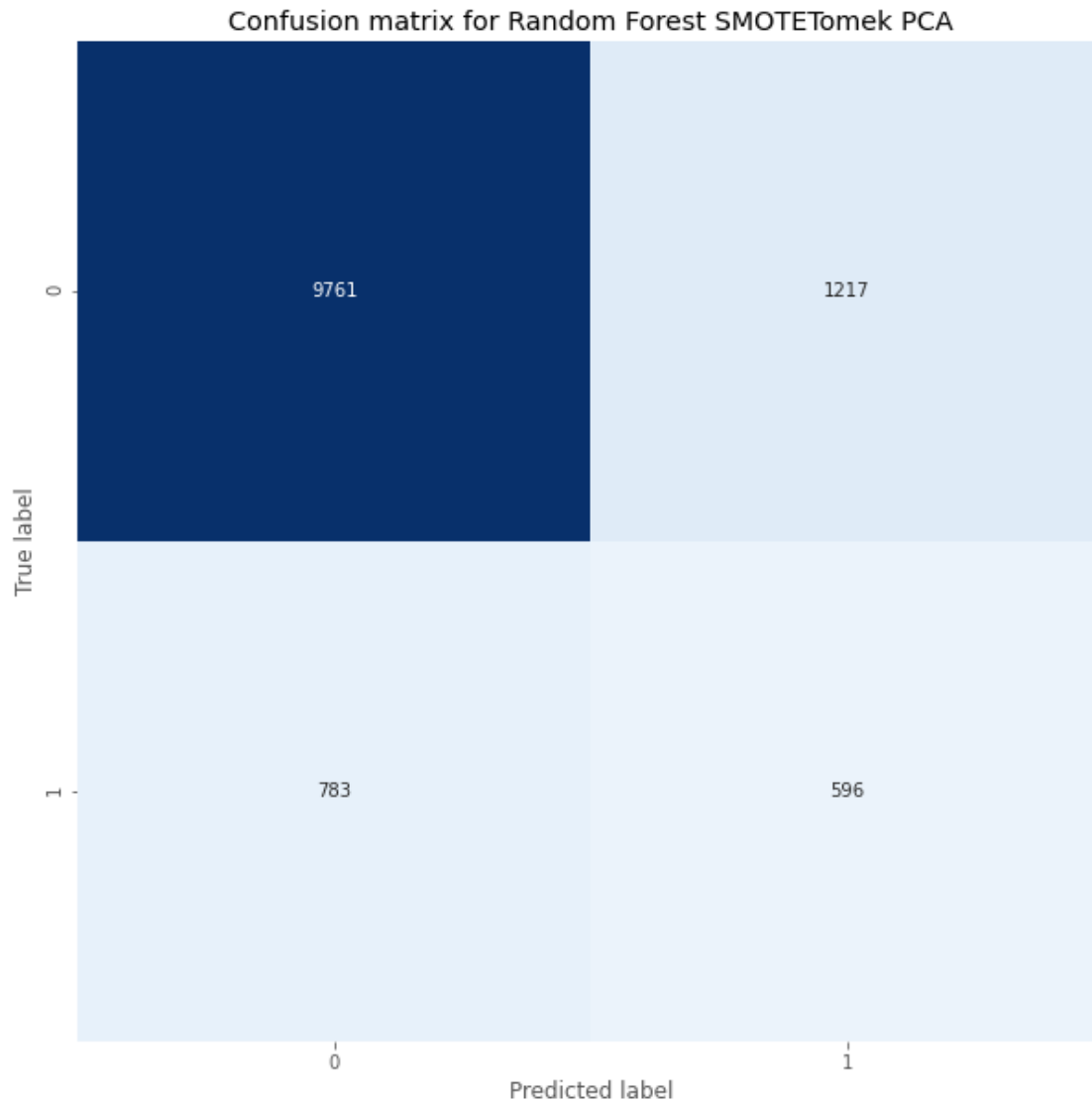
Results for Random Forest TomekLinks:  
Random Forest TomekLinks accuracy: 0.8798  
Random Forest TomekLinks f-score: 0.3768  
Random Forest TomekLinks recall: 0.3256  
Random Forest TomekLinks log\_loss: 1.5544



Results for Random Forest SMOTETomek:  
Random Forest SMOTETomek accuracy: 0.8606  
Random Forest SMOTETomek f-score: 0.3579  
Random Forest SMOTETomek recall: 0.3481  
Random Forest SMOTETomek log\_loss: 1.6868

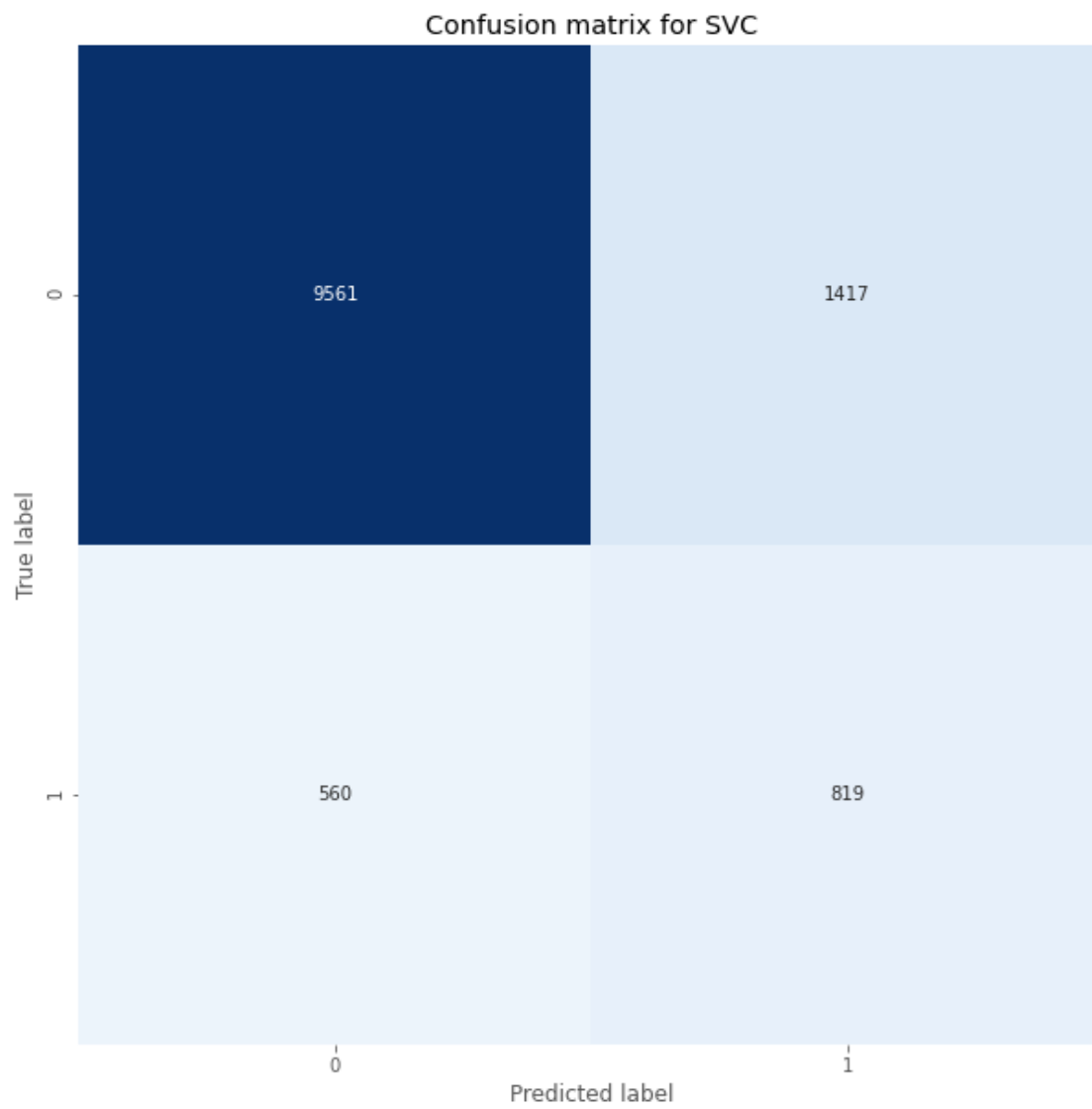


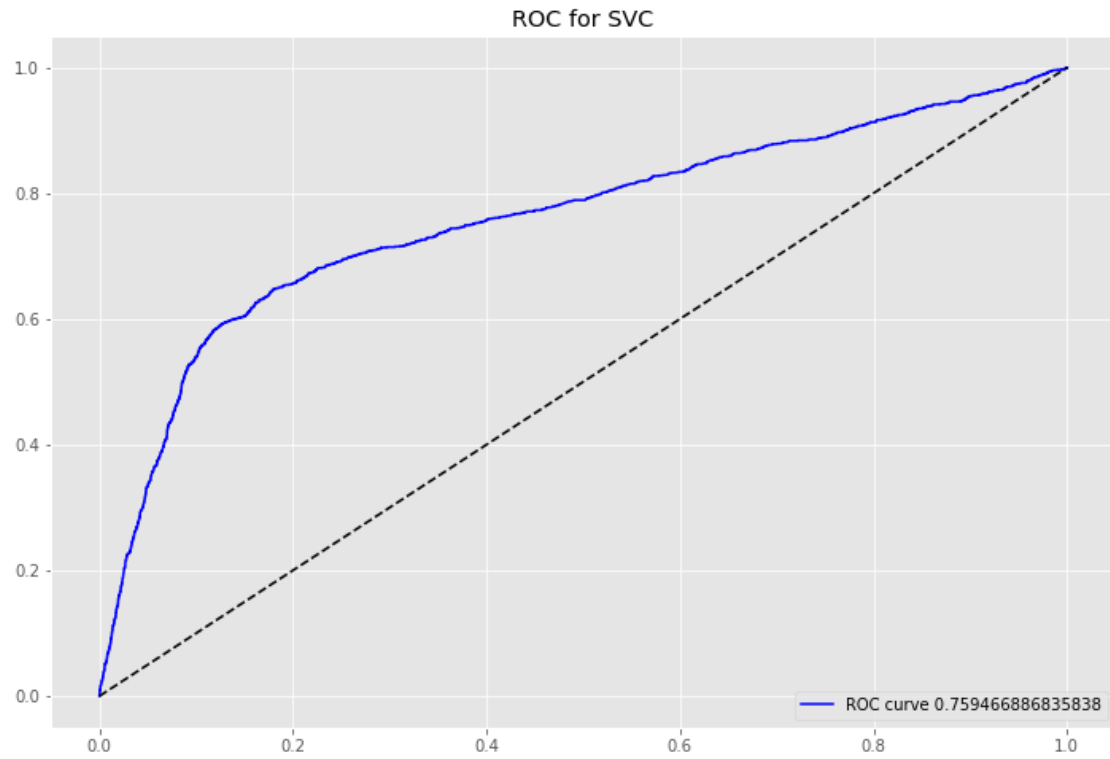
Results for Random Forest SMOTETomek PCA:  
Random Forest SMOTETomek PCA accuracy: 0.8381  
Random Forest SMOTETomek PCA f-score: 0.3734  
Random Forest SMOTETomek PCA recall: 0.4322  
Random Forest SMOTETomek PCA log\_loss: 1.8546



Results for SVC:  
SVC accuracy: 0.84  
SVC f-score: 0.4531  
SVC recall: 0.5939  
SVC log\_loss: 0.2892

[134]: <matplotlib.legend.Legend at 0x5765b80>





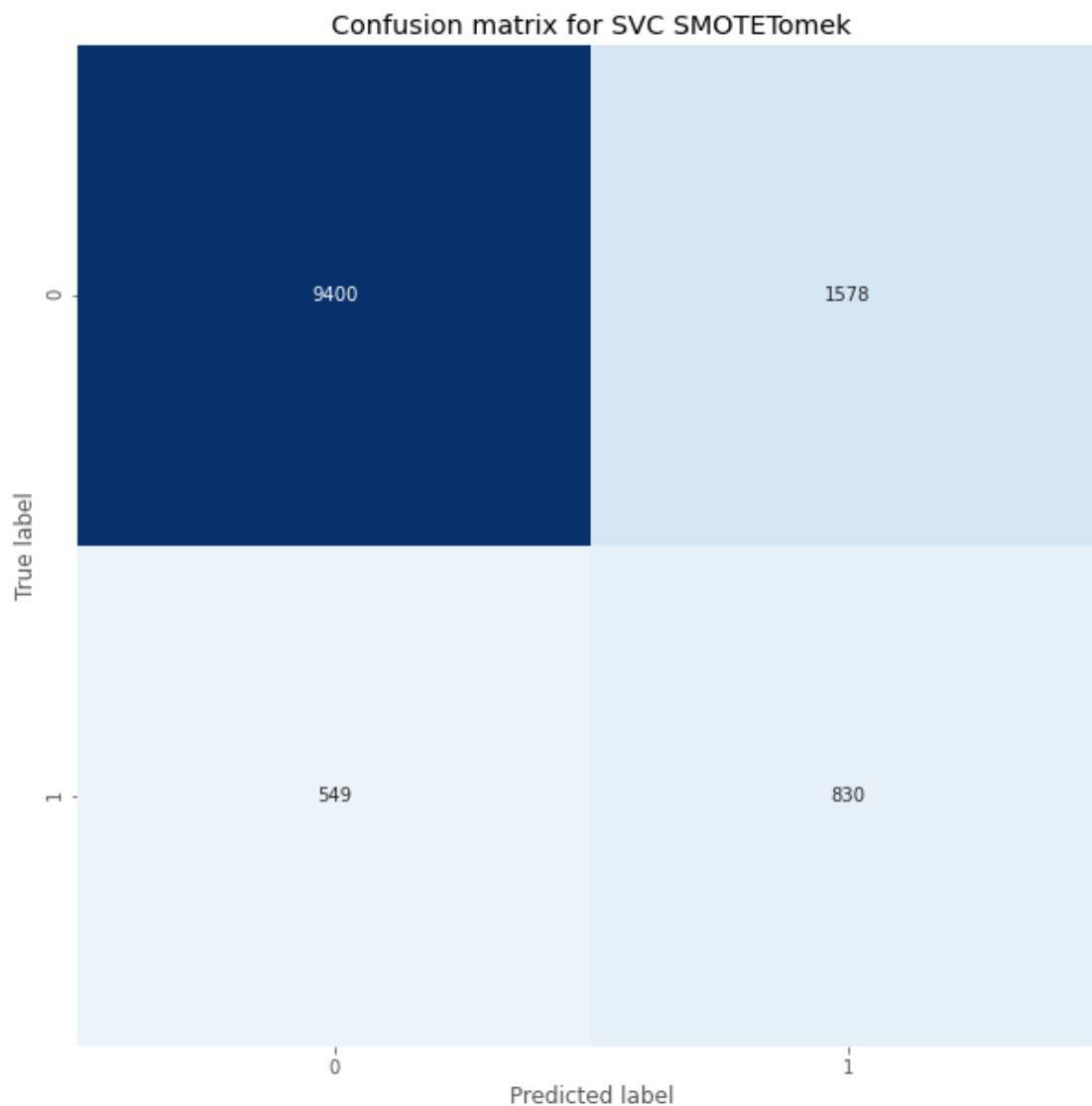
Results for SVC SMOTETomek:

SVC SMOTETomek accuracy: 0.8279

SVC SMOTETomek f-score: 0.4383

SVC SMOTETomek recall: 0.6019

SVC SMOTETomek log\_loss: 0.5165



[136]: Classifier	Accuracy	F-score	Recall	Log_loss
SVC	0.8400	0.4531	0.5939	0.2892
SVC SMOTETomek	0.8279	0.4383	0.6019	0.5165
Logistic Regression SMOTETomek	0.8107	0.4192	0.6120	0.5300
Logistic Regression under Sample	0.8104	0.4185	0.6113	0.5306
Logistic Regression SMOTE	0.8101	0.4181	0.6113	0.5293
Logistic Regression SMOTETomek PCA	0.7841	0.3936	0.6280	0.5618
Random Forest TomekLinks	0.8798	0.3768	0.3256	1.5544
Random Forest SMOTETomek PCA	0.8381	0.3734	0.4322	1.8546
Random Forest SMOTE	0.8631	0.3682	0.3575	1.6816
Random Forest	0.8805	0.3592	0.3002	1.0429
Random Forest SMOTETomek	0.8606	0.3579	0.3481	1.6868



Logistic Regression TomekLinks	0.8948	0.3428	0.2458	0.2860
Random Forest under Sample	0.7213	0.3367	0.6338	1.9856
Logistic Regression	0.8954	0.2798	0.1820	0.2855