ABSTRAK

Churn Prediction is a model that can classify a customer will continue using the service of a company or switch to using the services of another companies. The main problems in *churn prediction* is imbalanced data, the imbalance amount of data on two pieces of class. In this thesis resampling technique is used to modify the data sets, which combine sampling (synthetic minority over-sampling technique and neighborhood safety rule) to address the imbalance of data. The data used is the data obtained from the telecommunications company. Such data will be processing with SMOTE and NCL process, then the results of the 2 sampling techniques will be combined to create a new set of data, and the new data is ready for use. To calssify customer belong to churn or not, we used support vector machine classification technique. The research conducted proved to improve the performance of prediction model that was built, by using combine sampling can yield f1-measure performance equal to 41,9793%.

Keyword: churn prediction, imbalance data, support vector machine, synthetic minority oversampling technique, Neighbourhood cleaning rule, oversampling, undersampling.