ABSTRACT

Churn prediction is a data mining approach to predict potential customers leaving a service provider or commonly referred to as a customer churn. There are many alternative data mining that can be applied to model churn prediction. But the data mining classification model has limitations because of the special nature of churn imbalance class, so the accuracy of the classification results of the majority class (not churn) tends to rise while the classification results of the minority class (churn) tends to worsen. One approach in dealing with the imbalance class is the Synthetic Minority Over-Sampling Technique (SMOTE). The data used in this study using customer data PT. Telekomunikasi Indonesia Regional 7. The best performance obtained in this final project has F1-Measure value of 59.06% and accuracy of 95.92%.

Keywords: churn prediction, imbalance class, SMOTE, backpropagation, conjugate gradient powell beale, F1-measure.