with superior performance over existing models with similar data constraints. Experiments were performed using gradient boosted trees algorithm on the customers for identifying potential churners. Despite the practical limitations, our results demonstrate the improved prediction performance with the inclusion of these novel combined behavioral feature sets.

Once we have calculated the likelihood of churn for each customer, the model can be applied as a tool for creating prioritized ranked list for targeted marketing campaigns. The proposed technique is extremely advantageous to mobile telecom operators that only have inadequate customer profiles and hence provides wider applicability compared to existing models. Since the data for many months is available with telecom operators, they can use it over longer timelines and improve predictions.

It is of future interest to perform empirical comparisons with customers from diverse geographical locations. Future efforts will also be directed toward promoting the generalizability of the proposed technique not only in terms of extending the analysis duration of call data but also for extending to other industries where churning is a concern as well, like credit card which come with their own unique set of features. Another promising application area is for estimating the interest of the public in consuming information disseminated by the public visits to blogs, websites and other social media could be used as a dataset while retaining the same techniques adapted using CDR data. It is of special interest to extend our model to be able to handle detection of extreme churn events associated with competitive schemes and technological advantages mooted by competitors. Employing big data analytic techniques can reveal incident and occurrence sequences that lead to churn, which in turn can be utilized as features that can be fed back into our traditional churn prediction models.

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