# Micro Credit Loan Project Report

Many microfinance institutions (MFI), experts and donors are supporting the idea of using mobile financial services (MFS) which they feel are more convenient and efficient, and cost saving, than the traditional high-touch model used since long for the purpose of delivering microfinance services. Though, the MFI industry is primarily focusing on low income families and are very useful in such areas, the implementation of MFS has been uneven with both significant challenges and successes.
We are working with one such client that is in Telecom Industry. They are a fixed wireless telecommunications network provider. They have launched various products and have developed its business and organization based on the budget operator model, offering better products at Lower Prices to all value conscious customers through a strategy of disruptive innovation that focuses on the subscriber.

They understand the importance of communication and how it affects a person's life, thus, focusing on providing their services and products to low income families and poor customers that can help them in the need of hour.
They are collaborating with an MFI to provide micro-credit on mobile balances to be paid back in 5 days. The Consumer is believed to be defaulter if he deviates from the path of paying back the loaned amount within the time duration of 5 days. For the loan amount of 5 (in Indonesian Rupiah), payback amount should be 6 (in Indonesian Rupiah), while, for the loan amount of 10 (in Indonesian Rupiah), the payback amount should be 12 (in Indonesian Rupiah).

The dataset contains 209593 rows and 34 columns with no null values present.

Steps taken:

1. We check the data inside the dataset to understand the type of data.
2. We understand the data to treat it for the null values that are present.
3. After the treatment for the null values, we encode the data to produce columns all into numerical type.
4. We see few features that are either unique to each column such as 'Unnamed: 0' or features that are same for all the rows of the data that add no value to the learning.
5. Such data is removed so as to reduce the features for the dataset.
6. Now we do an extensive research using a correlation matrix to grade each column to the weightage to the target column.
7. We remove the features that has very little correlation.
8. Now we have reduced our dataset to the features that produces a weightage to the target column and hence ready to train the model.
9. On the basis, we better understand what value each micro credit features produce in the label predictions.

Conclusion:

From the data we can see that various features of the loan such are of the most importance for the people in terms of the repayment of the loan. On the other hand, features produces a reverse correlation of near to 0 correlation and hence, least importance.

This concludes that the model produced for the micro credit loan project predicts the results with an accuracy of 91%.