Test Questionnaire

Business Problem

Bank ABC wants to predict app score for current credit card customers. The app score will denote a customer's credit worthiness and help the bank in reducing credit default risk.

The target variable denoted as Bad_flag_worst6.

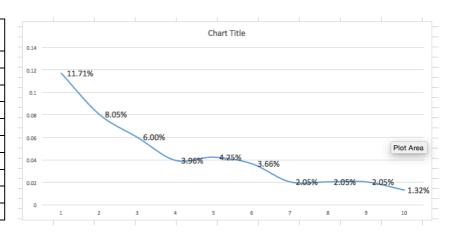
If value is 0 – it means customer has good credit history
If value is 1 – it means customer has falls into 30 DPD + bucket

Tookitaki Benchmarks

We have build ensemble model with gini as 37.9. Below is our rank ordering

Rank Ordering

Decile	66 features (Ensemble)	
Rank		
10	0.11713031	
9	0.08052709	
8	0.06002928	
7	0.03958944	
6	0.04245974	
5	0.03660322	
4	0.02052786	
3	0.0204978	
2	0.0204978	
1	0.01317716	



Data Explanation

- Account_Segment: customer's historical accounts data and payment behavior history
- Enquiry_Segment: customer's historical enquiry data such as enquiry amount, and enquiry purpose
- Data: current customer applications with demographic data
- Data given for April-Dec 2015.

Only 4.29% of the entire data falls under Bad_flag_worst6.

We are sharing 2 splits of data – 70% and 30%

Test Questionnaire

ASK: You need to build a model on 70% data and test on 30% data and share the following with us over word doc –

- o Data exploration insights what did you find and what decision did you take?
- Feature matrix List of features selected with gain (kindly share gain calculation) and how you calculated them
- o Model evaluation Gini and rank ordering

Please submit the code in github.

Some feature suggestions

Feature	Gain	Remarks
		mean count of accounts that is
		in 0-29 dpd bucket throughout
payment_history_avg_dpd_0_29_bucket	0.045653821	the payment history
		The total duration between last
		payment date and account
total_diff_lastpaymt_opened_dt	0.04083407	opened date of all accounts
		The smallest number of months
		passed before first 30+ dpd
min_months_last_30_plus	0.038216344	appeared for each account.
		[total cur_bal_amt / total credit
		limit]
		/
		[mean cur_bal_amt / (mean
utilisation_trend	0.037523553	<pre>credit limit+ mean_cashlimit)]</pre>
		# of enquiry made in past 365
count_enquiry_recency_365	0.036216624	days
		[total cur_bal_amt / total credit
Ratio_currbalance_creditlimit	0.035640536	limit]
		The average duration between
		last payment date and account
mean_diff_lastpaymt_opened_dt	0.032185579	opened date of all accounts
		average difference between
		enquiry dt_opened date and
mean_diff_open_enquiry_dt	0.031057926	enquiry date
		average length of
payment_history_mean_length	0.029258469	payment_history variable
max_freq_enquiry	0.024501434	most frequent enquiry purpose
		# of enquiry made in past 90
count_enquiry_recency_90	0.023796745	days
		ratio of secured loan type
		enquiry purpose to total
perc_unsecured_others	0.023428297	enquiry purpose made