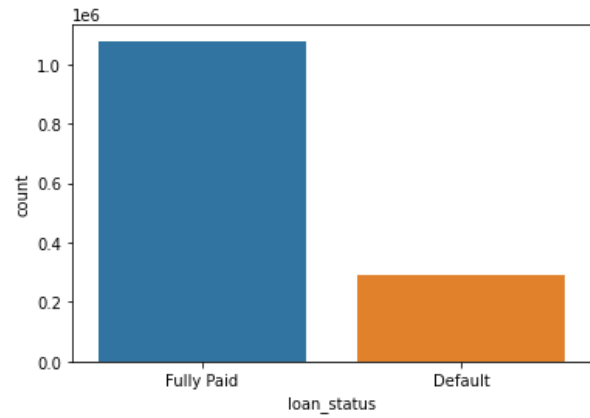




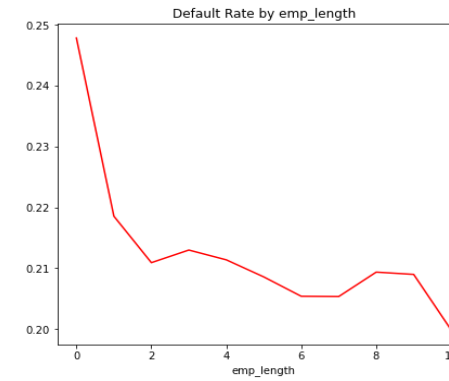
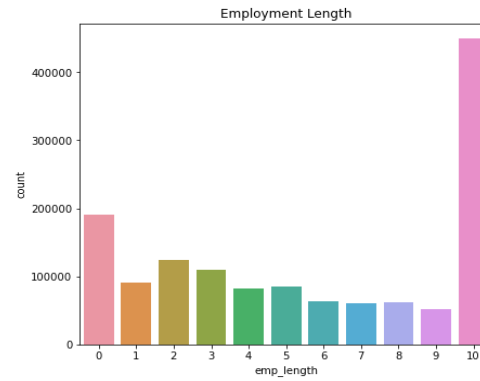
LOAN PREDICTION

W E I D O N G

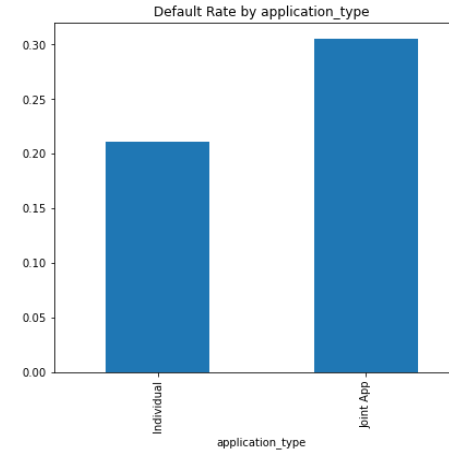
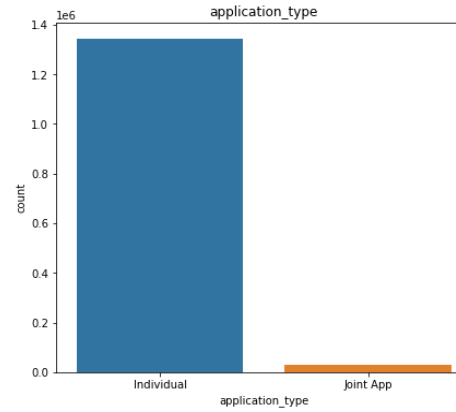
5 / 7 / 2 1



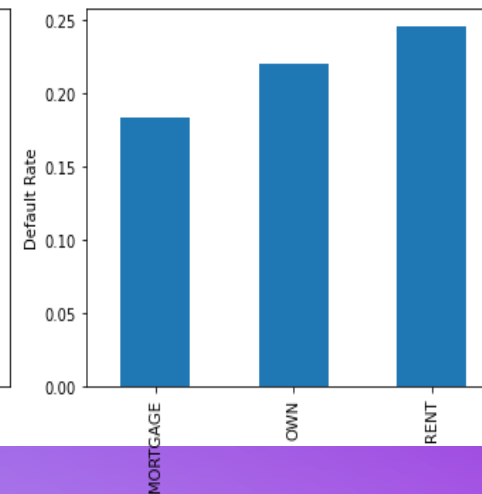
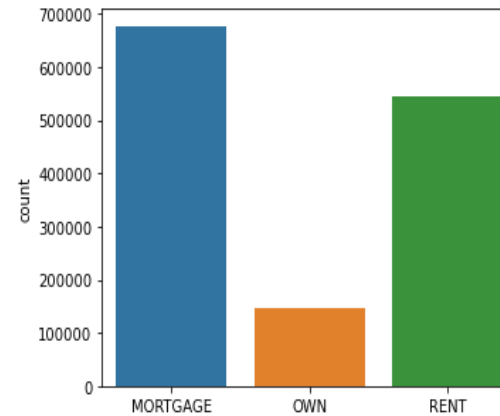
Loan status



Employment length

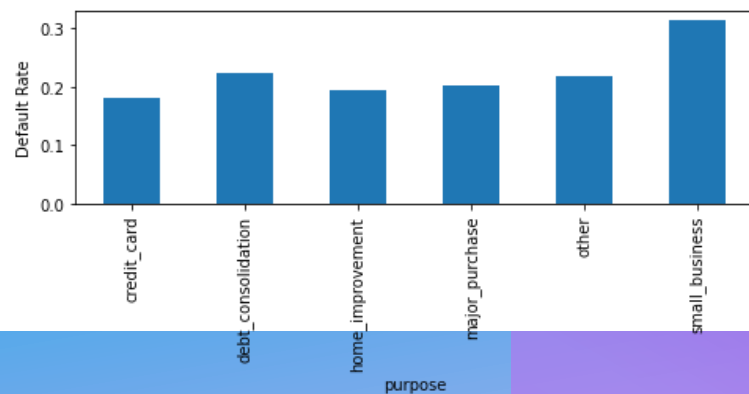
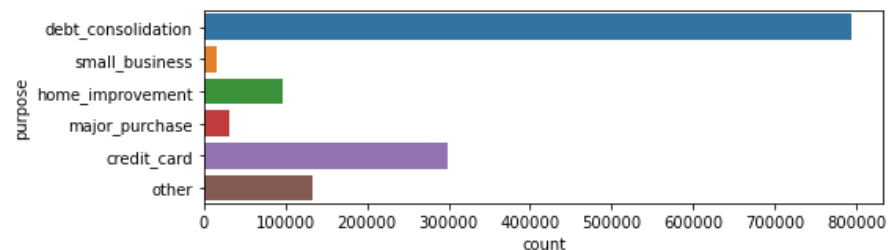
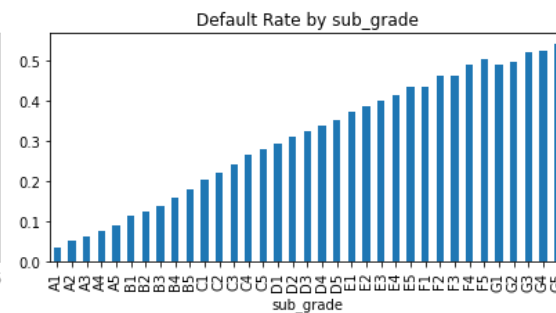
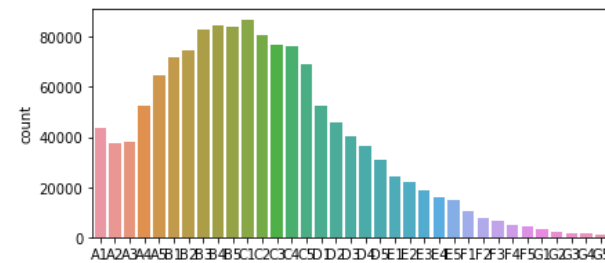
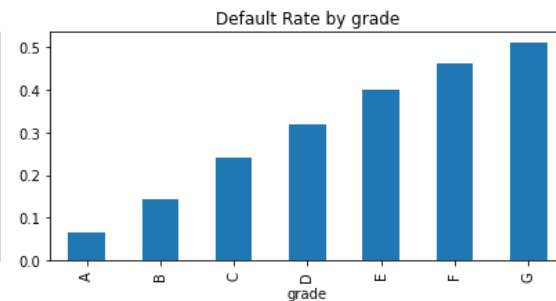
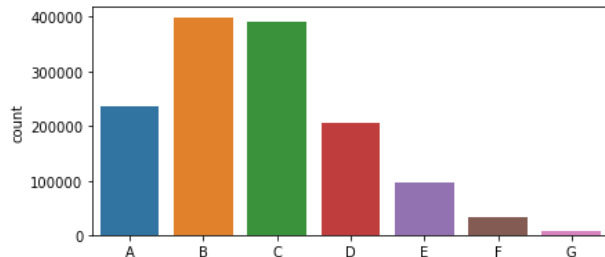


Application types

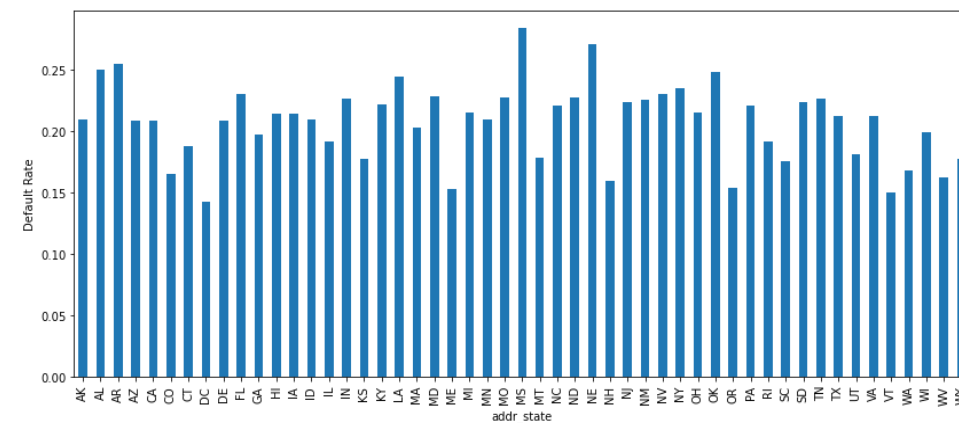
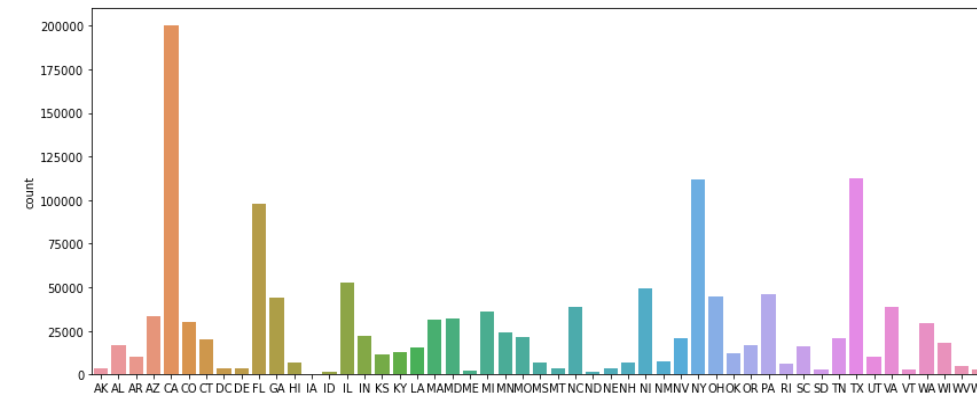


Homeownership

Default rate in different groups



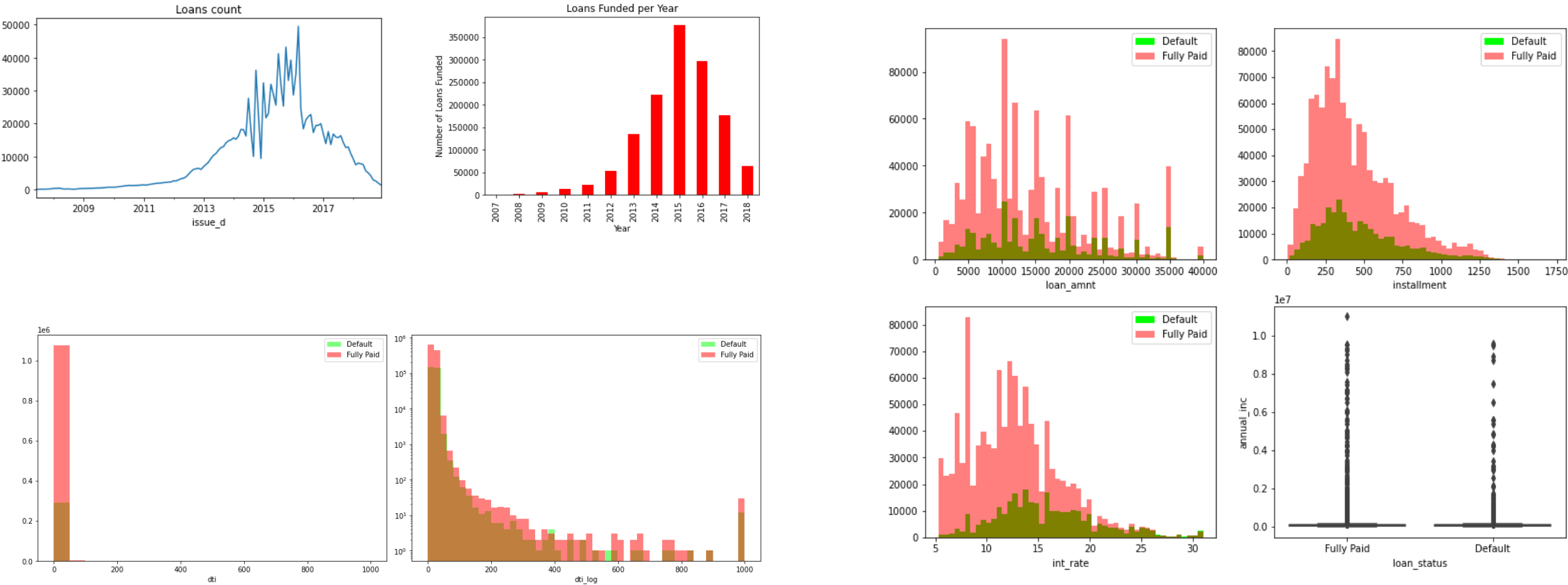
Grade



States

Purpose

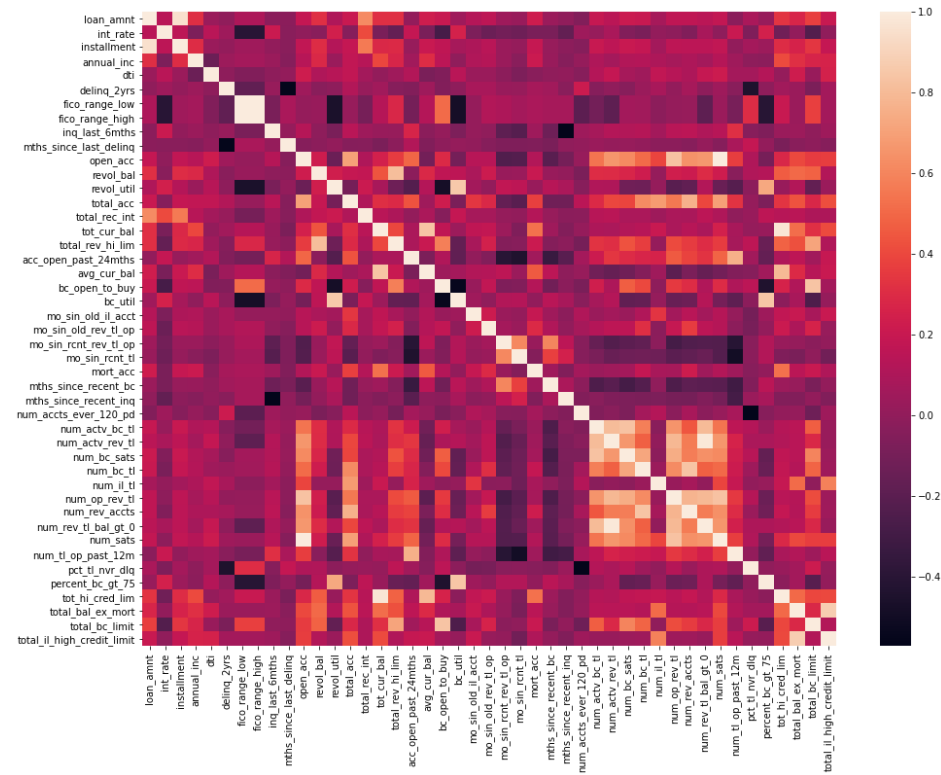
Loan amount distribution



Loan status and dti ratio

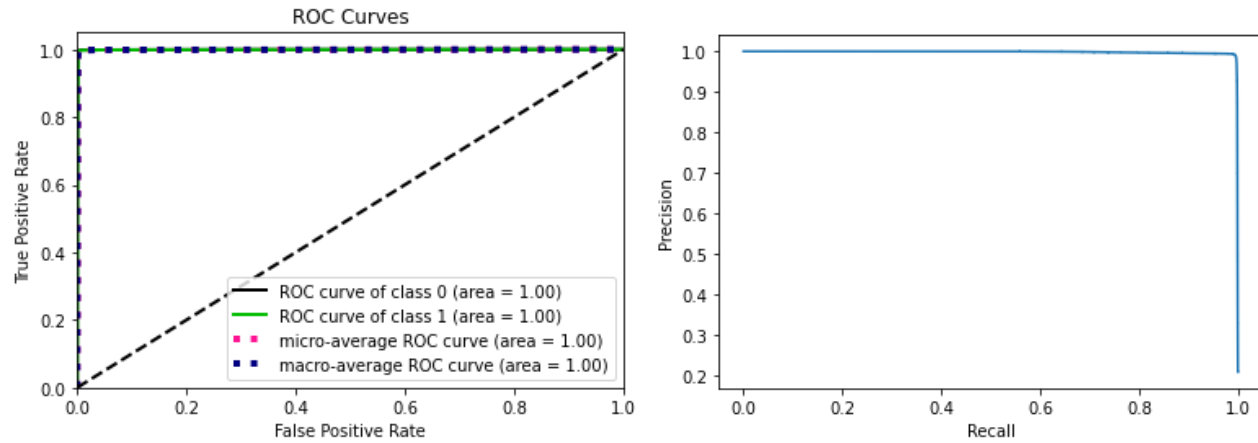
Loan status distribution with different loan amounts

Feature correlations

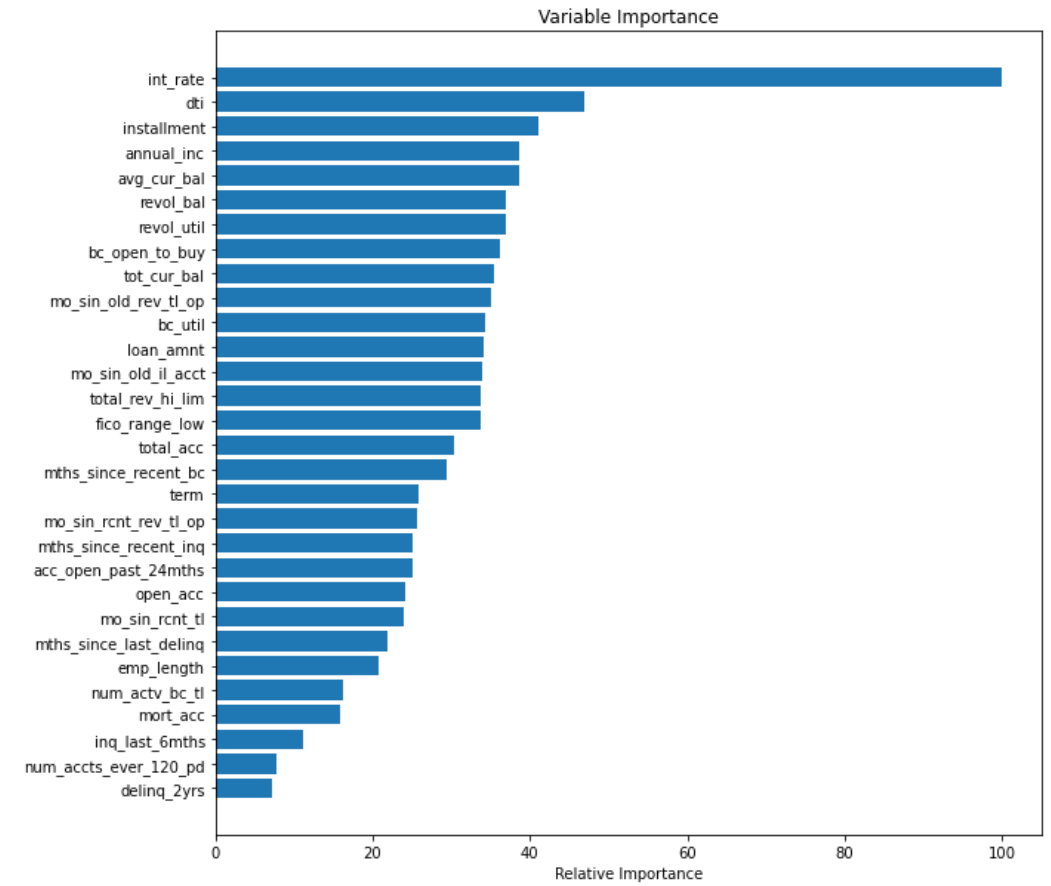
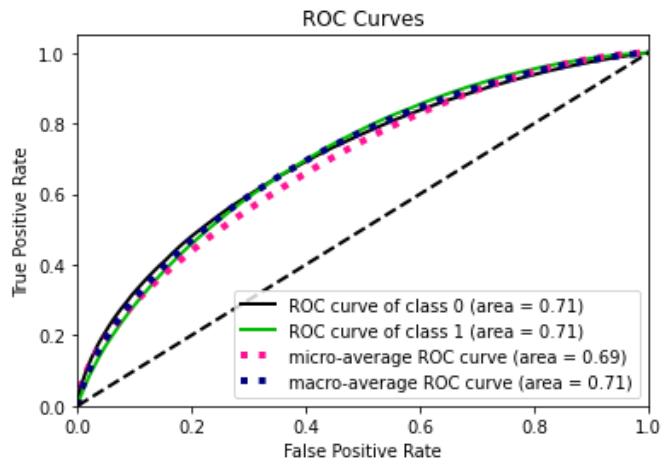


Feature 1	Feature 2	Correlation
fico_range_low	fico_range_high	1.00
open_acc	num_sats	0.99
num_actv_rev_tl	num_rev_tl_bal_gt_0	0.98
tot_cur_bal	tot_hi_cred_lim	0.97
loan_amnt	installment	0.95

Logistic Regression



Random Forest



Model metrics with select model

Model	Class	Values			ROC AUC	PR AUC	LogLoss
		Precision	Recall	F1-Score			
RF	0	0.89	0.60	0.72	0.3961	0.7208	0.6346
	1	0.32	0.72	0.45			
LR	0	1	1	1	0.9991	0.9973	0.0380
	1	0.99	0.99	0.99			