UNBANKED CLIENT'S LOAN DEFAULT PREDICTION:

There is a general case scenario where most of the people struggle to get loans from financial institutions (like banks, credit unions etc.) due to non-existent or insufficient credit history of credit. This project aims to provide solution of the problem by conducting a quantitative analysis to predict Unbanked Client's Repayment Abilities so that financial institutions can broaden financial inclusion for the unbanked population.

Dataset Source and description:

Dataset used for the analysis is referred from: Kaggle Home Credit Default Risk. The data consists of alternative banking information such as telecom, income, scores from external body, family, housing, occupation, Credit card payment information, and so on.

COLUMN DESCRIPTION:

SK_ID_CURR	ID of loan in our sample		
TARGET	Target variable (1 - client with payment difficulties: he/she had late payment more than X days on at least one of the first Y installments of the loan in our sample, 0 - all other cases)		
NAME_CONTRACT_TYPE	Identification if loan is cash or revolving. Installment credit gives borrowers a lump sum, and fixed, scheduled payments are made until the loan is paid in full. Examples of installment loans include mortgages, auto loans, student loans, and personal loans. Revolving credit allows a borrower to spend the money they have borrowed, repay it, and borrow again as needed. Credit cards and credit lines are examples of revolving credit.		
CODE_GENDER	Gender of the client		
FLAG_OWN_CAR	Flag if the client owns a car		
FLAG_OWN_REALTY	Flag if client owns a house or flat		
CNT_CHILDREN	Number of children the client has		
AMT_INCOME_TOTAL	Income of the client		
AMT_CREDIT	Credit amount of the loan		
AMT_ANNUITY	Loan annuity: An annuity loan is a situation in which an annuity holder will borrow money against the value of his/her annuity contract. The term "annuity" refers to an insurance contract issued and distributed by financial institutions with the intention of paying out invested funds in a fixed income stream in the future.		
AMT_GOODS_PRICE	For consumer loans it is the price of the goods for which the loan is given		
NAME_TYPE_SUITE	Who was accompanying client when he was applying for the loan		

NAME_INCOME_TYPE	Client's income type (businessman, working, maternity leave…)		
NAME_EDUCATION_TYPE	Level of highest education the client achieved		
NAME_FAMILY_STATUS	Family status of the client		
NAME_HOUSING_TYPE	What is the housing situation of the client (renting, living with parents, ...)		
REGION_POPULATION_RELATIVE	Normalized population of region where client lives (higher number means the client lives in more populated region) normalized		
DAYS_BIRTH	Client's age in days at the time of application (time only relative to the application)		
DAYS_EMPLOYED	How many days before the application the person started current employment (time only relative to the application)		
DAYS_REGISTRATION	How many days before the application did client change his registration (time only relative to the application)		
DAYS_ID_PUBLISH	How many days before the application did client change the identity document with which he applied for the loan (time only relative to the application)		
OWN_CAR_AGE	Age of client's car		
FLAG_MOBIL	Did client provide mobile phone (1=YES, 0=NO)		
FLAG_EMP_PHONE	Did client provide work phone (1=YES, 0=NO)		
FLAG_WORK_PHONE	Did client provide home phone (1=YES, 0=NO)		
FLAG_CONT_MOBILE	Was mobile phone reachable (1=YES, 0=NO)		
FLAG_PHONE	Did client provide home phone (1=YES, 0=NO)		
FLAG_EMAIL	Did client provide email (1=YES, 0=NO)		
OCCUPATION_TYPE	What kind of occupation does the client have		
CNT_FAM_MEMBERS	How many family members does client have		
REGION_RATING_CLIENT	Our rating of the region where client lives (1,2,3)		
REGION_RATING_CLIENT_W_CITY	Our rating of the region where client lives with taking city into account (1,2,3)		
WEEKDAY_APPR_PROCESS_START	On which day of the week did the client apply for the loan		
HOUR_APPR_PROCESS_START	Approximately at what hour did the client apply for the loan(rounded)		
REG_REGION_NOT_LIVE_REGION	Flag if client's permanent address does not match contact address (1=different, 0=same, at region level)		
REG_REGION_NOT_WORK_REGION	Flag if client's permanent address does not match work address (1=different, 0=same, at region level)		
LIVE_REGION_NOT_WORK_REGION	Flag if client's contact address does not match work address (1=different, 0=same, at region level)		
REG_CITY_NOT_LIVE_CITY	Flag if client's permanent address does not match contact address (1=different, 0=same, at city level)		
REG_CITY_NOT_WORK_CITY	Flag if client's permanent address does not match work address (1=different, 0=same, at city level)		
LIVE_CITY_NOT_WORK_CITY	Flag if client's contact address does not match work address (1=different, 0=same, at city level)		

ORGANIZATION_TYPE	Type of organization where client works		
EXT_SOURCE_1	Normalized score from external data source		
EXT_SOURCE_2	Normalized score from external data source		
EXT_SOURCE_3	Normalized score from external data source		
APARTMENTS_AVG	Normalized Average area of the Apartments size.		
BASEMENTAREA_AVG	Normalized Average of the Basements area.		
YEARS_BEGINEXPLUATATION_AVG	Normalized Average of the Basements area.		
YEARS_BUILD_AVG	The average age of building where the client lives		
COMMONAREA_AVG	The average of the common area of the Building where the client lives		
ELEVATORS_AVG	The average number of the elevators in the building where the client lives		
ENTRANCES_AVG	The average number of the entrances in the building where the client lives		
FLOORSMAX_AVG	The Average number of floors in the building		
FLOORSMIN_AVG	The Average number of floors in the building		
LANDAREA_AVG	Normalized Average of the land area		
LIVINGAPARTMENTS_AVG	Normalized Average of the Living apartments area		
LIVINGAREA_AVG	The average of the living area of the building where the client lives		
NONLIVINGAPARTMENTS_AVG	Normalized Average of the Non Living apartments		
NONLIVINGAREA_AVG	Normalized Average of the Non Living area of the building		
APARTMENTS_MODE	Normalized Mode of the Apartments size.		
BASEMENTAREA_MODE	Normalized Mode of the Basements area.		
YEARS_BEGINEXPLUATATION_MODE	Normalized information about building where the client lives, What is average (_AVG suffix), modus (_MODE suffix), median (_MEDI suffix) apartment size, common area, living area, age of building, number of elevators, number of entrances, state of the building, number of floor		
YEARS_BUILD_MODE	The Mode age of building where the client lives		
COMMONAREA_MODE	The mode of the common area of the Building where the client lives		
ELEVATORS_MODE	The mode number of the elevators in the building where the client lives		
ENTRANCES_MODE	The mode number of the entrances in the building where the client lives		
FLOORSMAX_MODE	The number of floors in the building		
FLOORSMIN_MODE	The number of floors in the building		
LANDAREA_MODE	Normalized mode of the land area		
LIVINGAPARTMENTS_MODE	Normalized mode of the Living apartments		
LIVINGAREA_MODE	The mode of the living area of the building where the client lives		
NONLIVINGAPARTMENTS_MODE	Normalized mode of the Non Living apartments where the client lives		

NONLIVINGAREA_MODE	Normalized mode of the Non Living area of the building where the client lives		
APARTMENTS_MEDI	Normalized Median of the Apartments size.		
BASEMENTAREA_MEDI	Normalized Median of the Basements area.		
YEARS_BEGINEXPLUATATION_MEDI	Normalized information about building where the client lives, What is average (_AVG suffix), modus (_MODE suffix), median (_MEDI suffix) apartment size, common area, living area, age of building, number of elevators, number of entrances, state of the building, number of floor		
YEARS_BUILD_MEDI	The Median age of building where the client lives		
COMMONAREA_MEDI	The median of the common area of the Building where the client lives		
ELEVATORS_MEDI	The median number of the elevators in the building where the client lives		
ENTRANCES_MEDI	The median number of the entrances in the building where the client lives		
FLOORSMAX_MEDI	The number of floors in building		
FLOORSMIN_MEDI	The number of floors in building		
LANDAREA_MEDI	The normalized median land area of building		
LIVINGAPARTMENTS_MEDI	The normalized median area of apartment		
LIVINGAREA_MEDI	The normalized median living area of apartment		
NONLIVINGAPARTMENTS_MEDI	The normalized median non-living area of apartment		
NONLIVINGAREA_MEDI	The normalized median non living area of building		
FONDKAPREMONT_MODE	Normalized information about building where the client lives, What is average (_AVG suffix), modus (_MODE suffix), median (_MEDI suffix) apartment size, common area, living area, age of building, number of elevators, number of entrances, state of the building, number of floor		
HOUSETYPE_MODE	What is the housing type of a building where the client lives? (E.g. A block of flat)		
TOTALAREA_MODE	What is normalized modus total area of the building where the client lives?		
WALLSMATERIAL_MODE	The building where the client lives uses which type of material?		
EMERGENCYSTATE_MODE	Does building where the client lives has emergency exits and safety?(Yes/No)		
OBS_30_CNT_SOCIAL_CIRCLE	It Indicates the number of times it is been observed that client's social surrounding had defaulted within 30 days		
DEF_30_CNT_SOCIAL_CIRCLE	It Indicates the number of times that client's social surrounding had defaulted within 30 days		
OBS_60_CNT_SOCIAL_CIRCLE	It Indicates the number of times it is been observed that client's social surrounding had defaulted within 60 days		
DEF_60_CNT_SOCIAL_CIRCLE	It Indicates the number of times that client's social surrounding had defaulted within 60 days		
DAYS_LAST_PHONE_CHANGE	How many days before application did client change phone		

FLAG_DOCUMENT_2	Did client provide document 2		
FLAG_DOCUMENT_3	Did client provide document 3		
FLAG_DOCUMENT_4	Did client provide document 4		
FLAG_DOCUMENT_5	Did client provide document 5		
FLAG_DOCUMENT_6	Did client provide document 6		
FLAG_DOCUMENT_7	Did client provide document 7		
FLAG_DOCUMENT_8	Did client provide document 8		
FLAG_DOCUMENT_9	Did client provide document 9		
FLAG_DOCUMENT_10	Did client provide document 10		
FLAG_DOCUMENT_11	Did client provide document 11		
FLAG_DOCUMENT_12	Did client provide document 12		
FLAG_DOCUMENT_13	Did client provide document 13		
FLAG_DOCUMENT_14	Did client provide document 14		
FLAG_DOCUMENT_15	Did client provide document 15		
FLAG_DOCUMENT_16	Did client provide document 16		
FLAG_DOCUMENT_17	Did client provide document 17		
FLAG_DOCUMENT_18	Did client provide document 18		
FLAG_DOCUMENT_19	Did client provide document 19		
FLAG_DOCUMENT_20	Did client provide document 20		
FLAG_DOCUMENT_21	Did client provide document 21		
AMT_REQ_CREDIT_BUREAU_HOUR	Number of enquiries to Credit Bureau about the client one hour before application		
AMT_REQ_CREDIT_BUREAU_DAY	Number of enquiries to Credit Bureau about the client one day before application (excluding one hour before application)		
AMT_REQ_CREDIT_BUREAU_WEEK	Number of enquiries to Credit Bureau about the client one week before application (excluding one day before application)		
AMT_REQ_CREDIT_BUREAU_MON	Number of enquiries to Credit Bureau about the client one month before application (excluding one week before application)		
AMT_REQ_CREDIT_BUREAU_QRT	Number of enquiries to Credit Bureau about the client 3 month before application (excluding one month before application)		
AMT_REQ_CREDIT_BUREAU_YEAR	Number of enquiries to Credit Bureau about the client one day year (excluding last 3 months before application)		