In [103…
```
import numpy as np
import pandas as pd
import os
import warnings
warnings.filterwarnings('ignore')
import matplotlib.pyplot as plt
import seaborn as sns
```

This is the dataset

In [104…
```
app_train = pd.read_csv('/Users/sami/Desktop/home-credit-default-risk/applic
print('Training data shape: ', app_train.shape)
app_train.head()
```

```
Training data shape:  (307511, 122)
```

Out[104]:

	SK_ID_CURR	TARGET	NAME_CONTRACT_TYPE	CODE_GENDER	FLAG_OWN_CAR	FLAG_
0	100002	1	Cash loans	M	N	
1	100003	0	Cash loans	F	N	
2	100004	0	Revolving loans	M	Y	
3	100006	0	Cash loans	F	N	
4	100007	0	Cash loans	M	N	

5 rows × 122 columns

In [105…
```
def missing_values_table(df):
    mis_val = df.isnull().sum()
    mis_val_percent = 100 * mis_val/ len(df)
    mis_val_table = pd.concat([mis_val, mis_val_percent], axis=1)
    mis_val_table_ren_columns = mis_val_table.rename(
    columns = {0 : 'Missing Values', 1 : '% of Total Values'})
    mis_val_table_ren_columns = mis_val_table_ren_columns[
        mis_val_table_ren_columns.iloc[:,1] != 0].sort_values(
    '% of Total Values', ascending=False).round(1)
    print ("Your selected dataframe has " + str(df.shape[1]) + " columns.\n"
        "There are " + str(mis_val_table_ren_columns.shape[0]) +" columns th
    return mis_val_table_ren_columns
# function to check percentage of missing values in a column
```

In [106…
```
missing_values = missing_values_table(app_train)
missing_values
```

```
Your selected dataframe has 122 columns.
There are 67 columns that have missing values.
```

Out[106]:

	Missing Values	% of Total Values
COMMONAREA_MEDI	214865	69.9
COMMONAREA_AVG	214865	69.9
COMMONAREA_MODE	214865	69.9
NONLIVINGAPARTMENTS_MEDI	213514	69.4
NONLIVINGAPARTMENTS_MODE	213514	69.4
...	...	...
EXT_SOURCE_2	660	0.2
AMT_GOODS_PRICE	278	0.1
AMT_ANNUITY	12	0.0
CNT_FAM_MEMBERS	2	0.0
DAYS_LAST_PHONE_CHANGE	1	0.0

67 rows × 2 columns

In [107…
```
app_train.dtypes.value_counts()
```

Out[107]:
```
float64    65
int64      41
object     16
dtype: int64
```

In [108…
```
app_train.select_dtypes('object').apply(pd.Series.nunique, axis = 0)
```

Out[108]:
```
NAME_CONTRACT_TYPE              2
CODE_GENDER                     3
FLAG_OWN_CAR                    2
FLAG_OWN_REALTY                 2
NAME_TYPE_SUITE                 7
NAME_INCOME_TYPE                8
NAME_EDUCATION_TYPE             5
NAME_FAMILY_STATUS              6
NAME_HOUSING_TYPE               6
OCCUPATION_TYPE                18
WEEKDAY_APPR_PROCESS_START      7
ORGANIZATION_TYPE              58
FONDKAPREMONT_MODE              4
HOUSETYPE_MODE                  3
WALLSMATERIAL_MODE              7
EMERGENCYSTATE_MODE             2
dtype: int64
```

In [109…
```
from sklearn.preprocessing import LabelEncoder
le = LabelEncoder()
le_count = 0
for col in app_train:
    if app_train[col].dtype == 'object':
        if len(list(app_train[col].unique())) <= 2:
            le.fit(app_train[col])
            app_train[col] = le.transform(app_train[col])
            le_count += 1
print('%d columns were label encoded.' % le_count)
# performing label encoding
```

```
3 columns were label encoded.
```

In [110…
```
app_train = pd.get_dummies(app_train)
print('Training Features shape: ', app_train.shape)
# performing one hhot encoding on categorical data
```

```
Training Features shape:  (307511, 243)
```

In [111…
```
(app_train['DAYS_BIRTH'] / -365).describe()
```

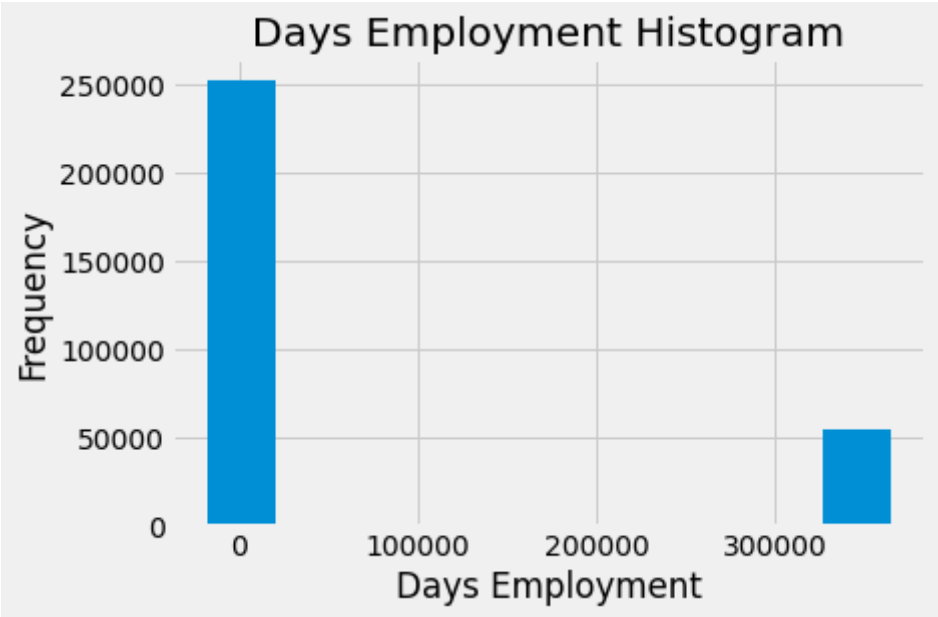
Out[111]:
```
count    307511.000000
mean         43.936973
std          11.956133
min          20.517808
25%          34.008219
50%          43.150685
75%          53.923288
max          69.120548
Name: DAYS_BIRTH, dtype: float64
```

In [112…
```
app_train['DAYS_EMPLOYED'].describe()
```

Out[112]:
```
count    307511.000000
mean      63815.045904
std      141275.766519
min      -17912.000000
25%       -2760.000000
50%       -1213.000000
75%        -289.000000
max      365243.000000
Name: DAYS_EMPLOYED, dtype: float64
```

In [113…
```
app_train['DAYS_EMPLOYED'].plot.hist(title = 'Days Employment Histogram');
plt.xlabel('Days Employment')
```

Out[113]:
```
Text(0.5, 0, 'Days Employment')
```

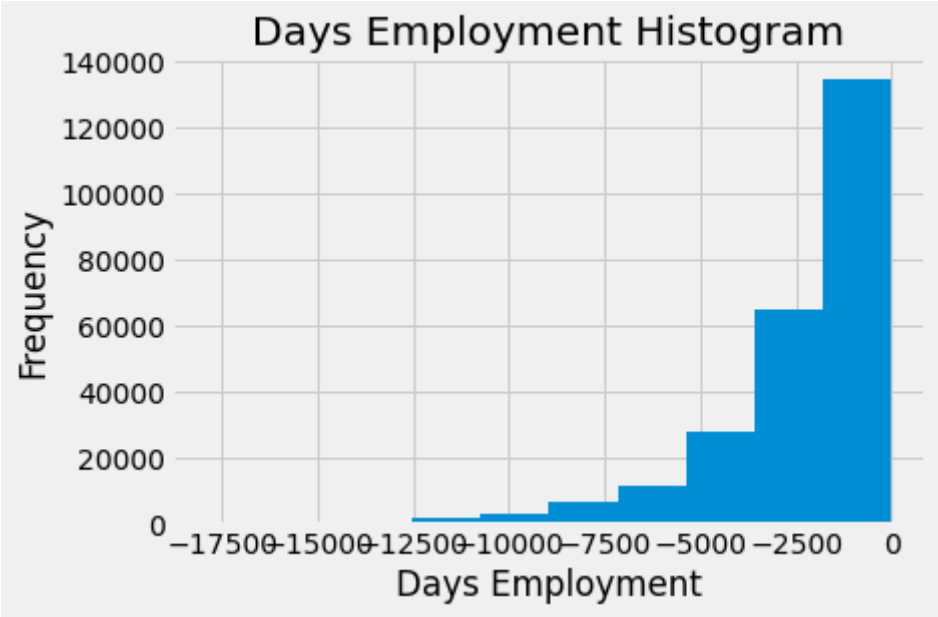


In [114…
```
anom = app_train[app_train['DAYS_EMPLOYED'] == 365243]
non_anom = app_train[app_train['DAYS_EMPLOYED'] != 365243]
print('The non-anomalies default on %0.2f%% of loans' % (100 * non_anom['TAR
print('The anomalies default on %0.2f%% of loans' % (100 * anom['TARGET'].me
print('There are %d anomalous days of employment' % len(anom))
# calculating percentage of anomalies
```

```
The non-anomalies default on 8.66% of loans
The anomalies default on 5.40% of loans
There are 55374 anomalous days of employment
```

In [115…
```
app_train['DAYS_EMPLOYED_ANOM'] = app_train["DAYS_EMPLOYED"] == 365243
app_train['DAYS_EMPLOYED'].replace({365243: np.nan}, inplace = True)
app_train['DAYS_EMPLOYED'].plot.hist(title = 'Days Employment Histogram')
plt.xlabel('Days Employment')
```

Out[115]:
```
Text(0.5, 0, 'Days Employment')
```



In [116…
```
correlations = app_train.corr()['TARGET'].sort_values()
print('Most Positive Correlations:\n', correlations.tail(15))
print('\nMost Negative Correlations:\n', correlations.head(15))
```

```
Most Positive Correlations:
 OCCUPATION_TYPE_Laborers                              0.043019
FLAG_DOCUMENT_3                                        0.044346
REG_CITY_NOT_LIVE_CITY                                 0.044395
FLAG_EMP_PHONE                                         0.045982
NAME_EDUCATION_TYPE_Secondary / secondary special      0.049824
REG_CITY_NOT_WORK_CITY                                 0.050994
DAYS_ID_PUBLISH                                        0.051457
CODE_GENDER_M                                          0.054713
DAYS_LAST_PHONE_CHANGE                                 0.055218
NAME_INCOME_TYPE_Working                               0.057481
REGION_RATING_CLIENT                                   0.058899
REGION_RATING_CLIENT_W_CITY                            0.060893
DAYS_EMPLOYED                                          0.074958
DAYS_BIRTH                                             0.078239
TARGET                                                 1.000000
Name: TARGET, dtype: float64

Most Negative Correlations:
 EXT_SOURCE_3                           -0.178919
EXT_SOURCE_2                           -0.160472
EXT_SOURCE_1                           -0.155317
NAME_EDUCATION_TYPE_Higher education   -0.056593
CODE_GENDER_F                          -0.054704
NAME_INCOME_TYPE_Pensioner             -0.046209
DAYS_EMPLOYED_ANOM                     -0.045987
ORGANIZATION_TYPE_XNA                  -0.045987
FLOORSMAX_AVG                          -0.044003
FLOORSMAX_MEDI                         -0.043768
FLOORSMAX_MODE                         -0.043226
EMERGENCYSTATE_MODE_No                 -0.042201
HOUSETYPE_MODE_block of flats          -0.040594
AMT_GOODS_PRICE                        -0.039645
REGION_POPULATION_RELATIVE             -0.037227
Name: TARGET, dtype: float64
```

In [117…

```
app_train['DAYS_BIRTH'] = abs(app_train['DAYS_BIRTH'])
app_train['DAYS_BIRTH'].corr(app_train['TARGET'])
```

Out[117]:

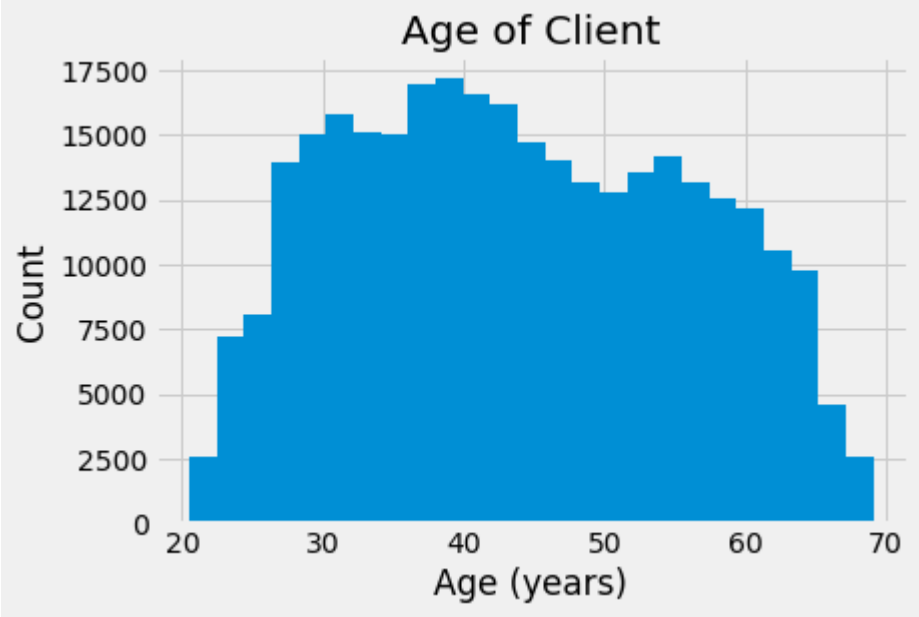
```
-0.07823930830982737
```

In [118…

```
plt.style.use('fivethirtyeight')
plt.hist(app_train['DAYS_BIRTH'] / 365, bins = 25)
plt.title('Age of Client')
plt.xlabel('Age (years)')
plt.ylabel('Count')
```

Out[118]:

```
Text(0, 0.5, 'Count')
```



LOGISTIC REGRESSION

In [119…
```
from sklearn.linear_model import LogisticRegression
```

In [120…
```
app_train
```

Out[120]:

	SK_ID_CURR	TARGET	NAME_CONTRACT_TYPE	FLAG_OWN_CAR	FLAG_OWN_REA
0	100002	1	0	0	
1	100003	0	0	0	
2	100004	0	1	1	
3	100006	0	0	0	
4	100007	0	0	0	
...	...	...	...	...	
307506	456251	0	0	0	
307507	456252	0	0	0	
307508	456253	0	0	0	
307509	456254	1	0	0	
307510	456255	0	0	0	

307511 rows × 244 columns

In [121…
```
app_train.dtypes
```

Out[121]:
```
SK_ID_CURR                          int64
TARGET                              int64
NAME_CONTRACT_TYPE                  int64
FLAG_OWN_CAR                        int64
FLAG_OWN_REALTY                     int64
                                    ...
WALLSMATERIAL_MODE_Stone, brick     uint8
WALLSMATERIAL_MODE_Wooden           uint8
EMERGENCYSTATE_MODE_No              uint8
EMERGENCYSTATE_MODE_Yes             uint8
DAYS_EMPLOYED_ANOM                   bool
Length: 244, dtype: object
```

In [122…
```
x = app_train.copy()
y = x.TARGET
x = x.drop(['TARGET'],axis=1)
```

In [123…
```
from sklearn.impute import SimpleImputer
from sklearn.preprocessing import MinMaxScaler
imputer = SimpleImputer(missing_values=np.nan, strategy='median')    # MEDIAN
scaler = MinMaxScaler(feature_range = (0, 1))
imputer.fit(x)
x = imputer.transform(x)
scaler.fit(x)
x = scaler.transform(x)
```

In [124…
```
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test = train_test_split(x,y,test_size=0.25,random_s
from sklearn.linear_model import LogisticRegression
lr = LogisticRegression(random_state=15)
lr.fit(x_train,y_train)
y_pred = lr.predict(x_test)
```

In [125…
```
from sklearn import metrics
cnf_matrix = metrics.confusion_matrix(y_test, y_pred)
cnf_matrix
```

Out[125]:
```
array([[70657,    84],
       [ 6074,    63]])
```

In [126…
```
from sklearn.metrics import classification_report
target_names = ['can_repay', 'cannot_repay']
print(classification_report(y_test, y_pred, target_names=target_names))
```

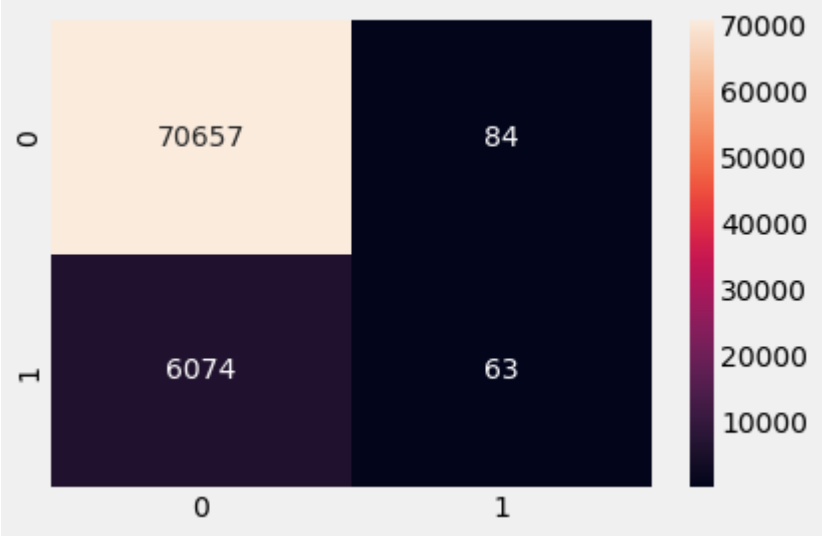
```
              precision    recall  f1-score   support

   can_repay       0.92      1.00      0.96     70741
cannot_repay       0.43      0.01      0.02      6137

    accuracy                           0.92     76878
   macro avg       0.67      0.50      0.49     76878
weighted avg       0.88      0.92      0.88     76878
```

In [127…
```
acc_lr = metrics.accuracy_score(y_test,y_pred)
acc_lr
```

Out[127]:
```
0.9198990608496579
```

In [128…
```
import seaborn as sns
sns.heatmap(cnf_matrix,annot = True,fmt='g')
```

Out[128]:
```
<AxesSubplot: >
```



Decision Tree

In [69]:
```
x = app_train.copy()
y = x.TARGET
x = x.drop(['TARGET'],axis=1)
feature_names = x.columns
labels = y.unique()
from sklearn.impute import SimpleImputer
from sklearn.preprocessing import MinMaxScaler
imputer = SimpleImputer(missing_values=np.nan, strategy='median')
scaler = MinMaxScaler(feature_range = (0, 1))
imputer.fit(x)
x = imputer.transform(x)
scaler.fit(x)
x = scaler.transform(x)
```

In [70]:
```
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test = train_test_split(x,y,test_size=0.25,random_s
```

In [71]:
```
from sklearn.tree import DecisionTreeClassifier
classifier = DecisionTreeClassifier(random_state=42)
classifier.fit(x_train,y_train)
```

Out[71]:
```
DecisionTreeClassifier(random_state=42)
```

In [72]:
```
from sklearn.tree import export_text
tree_rules = export_text(classifier,feature_names = list(feature_names))
print(tree_rules)
```

```
|--- EXT_SOURCE_3 <= 0.35
|   |--- EXT_SOURCE_2 <= 0.44
|   |   |--- EXT_SOURCE_3 <= 0.16
|   |   |   |--- EXT_SOURCE_2 <= 0.18
|   |   |   |   |--- AMT_CREDIT <= 0.03
|   |   |   |   |   |--- EXT_SOURCE_2 <= 0.00
|   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |--- EXT_SOURCE_2 >  0.00
|   |   |   |   |   |   |--- OBS_60_CNT_SOCIAL_CIRCLE <= 0.01
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.72
|   |   |   |   |   |   |   |   |--- WEEKDAY_APPR_PROCESS_START_WEDNESDAY <=
0.50
|   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.98
|   |   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START <= 0.80
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 6
|   |   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START >  0.80
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.98
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- WEEKDAY_APPR_PROCESS_START_WEDNESDAY >
0.50
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.77
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.77
|   |   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Secondary /
secondary special <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Secondary /
secondary special >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.72
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- OBS_60_CNT_SOCIAL_CIRCLE >  0.01
|   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.86
|   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Civil marriage <= 0.
50
|   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MODE <= 0.9
8
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MODE >  0.9
8
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Civil marriage >  0.
50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.86
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |--- AMT_CREDIT >  0.03
|   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.10
|   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.92
|   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.98
|   |   |   |   |   |   |   |   |   |--- COMMONAREA_AVG <= 0.01
|   |   |   |   |   |   |   |   |   |   |--- WEEKDAY_APPR_PROCESS_START_SATURDAY
<= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.30
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.30
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- WEEKDAY_APPR_PROCESS_START_SATURDAY
>  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- YEARS_BUILD_MEDI <= 0.69
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- YEARS_BUILD_MEDI >  0.69
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
```

```
|   |   |   |   |   |   |   |   |--- COMMONAREA_AVG >  0.01
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.13
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <=
0.14
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >
0.14
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.13
|   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <=
0.02
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >
0.02
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
7
|   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.98
|   |   |   |   |   |   |   |   |   |--- NAME_TYPE_SUITE_Unaccompanied <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- OBS_30_CNT_SOCIAL_CIRCLE <= 0.01
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- OBS_30_CNT_SOCIAL_CIRCLE >  0.01
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- NAME_TYPE_SUITE_Unaccompanied >  0.50
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_WEEK <= 0.06
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.05
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.05
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_WEEK >  0.06
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.92
|   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Laborers <= 0.50
|   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.10
|   |   |   |   |   |   |   |   |   |   |--- ENTRANCES_AVG <= 0.38
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.99
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 6
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.99
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- ENTRANCES_AVG >  0.38
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.10
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Laborers >  0.50
|   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.09
|   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <= 0.39
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >  0.39
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.09
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.10
|   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.14
|   |   |   |   |   |   |   |   |--- LANDAREA_AVG <= 0.01
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- LANDAREA_AVG >  0.01
|   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.14
|   |   |   |   |   |   |   |   |--- LANDAREA_MODE <= 0.14
|   |   |   |   |   |   |   |   |   |--- FLAG_PHONE <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MEDI <= 0.9
8
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.09
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.09
```

```
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 8
|   |   |   |   |   |   |   |   |   |   |---  YEARS_BEGINEXPLUATATION_MEDI >  0.9
8
|   |   |   |   |   |   |   |   |   |   |   |--- WEEKDAY_APPR_PROCESS_START_FRID
AY <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- WEEKDAY_APPR_PROCESS_START_FRID
AY >  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |---  FLAG_PHONE >  0.50
|   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAREA_MODE <= 0.02
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.17
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 6
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.17
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAREA_MODE >  0.02
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |---  LANDAREA_MODE >  0.14
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.52
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.52
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |---  EXT_SOURCE_2 >  0.18
|   |   |   |   |   |--- ORGANIZATION_TYPE_Electricity <= 0.50
|   |   |   |   |   |   |--- DAYS_BIRTH <= 0.66
|   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Higher education <= 0.50
|   |   |   |   |   |   |   |   |--- FONDKAPREMONT_MODE_reg oper account <= 0.50
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.08
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.01
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.89
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.89
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.01
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.87
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 8
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.87
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
3
|   |   |   |   |   |   |   |   |   |---  EXT_SOURCE_3 >  0.08
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.14
|   |   |   |   |   |   |   |   |   |   |   |--- FLAG_WORK_PHONE <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |   |   |--- FLAG_WORK_PHONE >  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.14
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.18
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
2
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.18
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
7
|   |   |   |   |   |   |   |   |---  FONDKAPREMONT_MODE_reg oper account >  0.50
|   |   |   |   |   |   |   |   |   |--- COMMONAREA_AVG <= 0.01
|   |   |   |   |   |   |   |   |   |   |--- COMMONAREA_MODE <= 0.00
|   |   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_AVG <= 0.08
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_AVG >  0.08
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- COMMONAREA_MODE >  0.00
|   |   |   |   |   |   |   |   |   |   |   |--- FLOORSMIN_MODE <= 0.06
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- FLOORSMIN_MODE >  0.06
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
```

```
|   |   |   |   |   |   |   |   |--- COMMONAREA_AVG >  0.01
|   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.42
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Trade: type 2
<= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 9
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Trade: type 2
>  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.42
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Higher education >  0.50
|   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.98
|   |   |   |   |   |   |   |   |   |--- NONLIVINGAPARTMENTS_MODE <= 0.02
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE <= 0.00
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE >  0.00
|   |   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.77
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
4
|   |   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.77
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |--- NONLIVINGAPARTMENTS_MODE >  0.02
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.18
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.18
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.98
|   |   |   |   |   |   |   |   |   |--- TOTALAREA_MODE <= 0.05
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- TOTALAREA_MODE >  0.05
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.87
|   |   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Drivers <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Drivers >  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.87
|   |   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Laborers <= 0.5
0
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Laborers >  0.5
0
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- DAYS_BIRTH >  0.66
|   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.70
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.16
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Transport: type 3 <=
0.50
|   |   |   |   |   |   |   |   |   |   |--- COMMONAREA_MODE <= 0.15
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.27
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.27
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- COMMONAREA_MODE >  0.15
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Transport: type 3 >
0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.16
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.70
|   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.80
|   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.46
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.79
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
```

```
|   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.79
|   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAREA_AVG <= 0.00
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAREA_AVG >  0.00
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.46
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.20
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.20
|   |   |   |   |   |   |   |   |   |   |   |--- TOTALAREA_MODE <= 0.01
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- TOTALAREA_MODE >  0.01
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.80
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.41
|   |   |   |   |   |   |   |   |   |   |   |--- OBS_60_CNT_SOCIAL_CIRCLE <= 0.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- OBS_60_CNT_SOCIAL_CIRCLE >  0.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.41
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.27
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.27
|   |   |   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.10
|   |   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
3
|   |   |   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.10
|   |   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 7
|   |   |   |   |   |--- ORGANIZATION_TYPE_Electricity >  0.50
|   |   |   |   |   |   |--- class: 1
|   |   |   |--- EXT_SOURCE_3 >  0.16
|   |   |   |   |--- EXT_SOURCE_2 <= 0.07
|   |   |   |   |   |--- DAYS_EMPLOYED <= 0.95
|   |   |   |   |   |   |--- CNT_CHILDREN <= 0.03
|   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.01
|   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.06
|   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Separated <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Separated >  0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.06
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.96
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.18
|   |   |   |   |   |   |   |   |   |   |   |--- BASEMENTAREA_MEDI <= 0.11
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- BASEMENTAREA_MEDI >  0.11
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.18
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.96
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.01
|   |   |   |   |   |   |   |   |--- BASEMENTAREA_MODE <= 0.00
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.04
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.04
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Kindergarten <=
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Kindergarten >
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- BASEMENTAREA_MODE >  0.00
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.24
```

```
|   |   |   |   |   |   |   |   |   |--- COMMONAREA_MEDI <= 0.01
|   |   |   |   |   |   |   |   |   |    |--- AMT_ANNUITY <= 0.06
|   |   |   |   |   |   |   |   |   |    |    |--- class: 0
|   |   |   |   |   |   |   |   |   |    |--- AMT_ANNUITY >  0.06
|   |   |   |   |   |   |   |   |   |    |    |--- class: 1
|   |   |   |   |   |   |   |   |   |--- COMMONAREA_MEDI >  0.01
|   |   |   |   |   |   |   |   |   |    |--- SK_ID_CURR <= 0.81
|   |   |   |   |   |   |   |   |   |    |    |--- truncated branch of depth 8
|   |   |   |   |   |   |   |   |   |    |--- SK_ID_CURR >  0.81
|   |   |   |   |   |   |   |   |   |    |    |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.24
|   |   |   |   |   |   |   |   |   |    |--- EXT_SOURCE_2 <= 0.07
|   |   |   |   |   |   |   |   |   |    |    |--- EXT_SOURCE_1 <= 0.09
|   |   |   |   |   |   |   |   |   |    |    |    |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |    |    |--- EXT_SOURCE_1 >  0.09
|   |   |   |   |   |   |   |   |   |    |    |    |--- truncated branch of depth 1
0
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.07
|   |   |   |   |   |   |   |   |   |    |--- DAYS_LAST_PHONE_CHANGE <= 0.81
|   |   |   |   |   |   |   |   |   |    |    |--- class: 0
|   |   |   |   |   |   |   |   |   |    |--- DAYS_LAST_PHONE_CHANGE >  0.81
|   |   |   |   |   |   |   |   |   |    |    |--- truncated branch of depth 3
|   |   |   |   |   |   |--- CNT_CHILDREN >  0.03
|   |   |   |   |   |   |    |--- LIVINGAREA_MODE <= 0.07
|   |   |   |   |   |   |    |    |--- DAYS_LAST_PHONE_CHANGE <= 0.50
|   |   |   |   |   |   |    |    |    |--- class: 1
|   |   |   |   |   |   |    |    |--- DAYS_LAST_PHONE_CHANGE >  0.50
|   |   |   |   |   |   |    |    |    |--- AMT_ANNUITY <= 0.06
|   |   |   |   |   |   |    |    |    |    |--- HOUR_APPR_PROCESS_START <= 0.54
|   |   |   |   |   |   |    |    |    |    |    |--- FLOORSMAX_MODE <= 0.06
|   |   |   |   |   |   |    |    |    |    |    |    |--- class: 0
|   |   |   |   |   |   |    |    |    |    |    |--- FLOORSMAX_MODE >  0.06
|   |   |   |   |   |   |    |    |    |    |    |    |--- class: 1
|   |   |   |   |   |   |    |    |    |    |--- HOUR_APPR_PROCESS_START >  0.54
|   |   |   |   |   |   |    |    |    |    |    |--- class: 0
|   |   |   |   |   |   |    |    |    |--- AMT_ANNUITY >  0.06
|   |   |   |   |   |   |    |    |    |    |--- COMMONAREA_AVG <= 0.00
|   |   |   |   |   |   |    |    |    |    |    |--- YEARS_BUILD_MEDI <= 0.64
|   |   |   |   |   |   |    |    |    |    |    |    |--- class: 0
|   |   |   |   |   |   |    |    |    |    |    |--- YEARS_BUILD_MEDI >  0.64
|   |   |   |   |   |   |    |    |    |    |    |    |--- class: 1
|   |   |   |   |   |   |    |    |    |    |--- COMMONAREA_AVG >  0.00
|   |   |   |   |   |   |    |    |    |    |    |--- class: 0
|   |   |   |   |   |   |    |--- LIVINGAREA_MODE >  0.07
|   |   |   |   |   |   |    |    |--- SK_ID_CURR <= 0.94
|   |   |   |   |   |   |    |    |    |--- NAME_FAMILY_STATUS_Single / not married
<= 0.50
|   |   |   |   |   |   |    |    |    |    |--- YEARS_BUILD_AVG <= 0.79
|   |   |   |   |   |   |    |    |    |    |    |--- CNT_FAM_MEMBERS <= 0.13
|   |   |   |   |   |   |    |    |    |    |    |    |--- truncated branch of depth 9
|   |   |   |   |   |   |    |    |    |    |    |--- CNT_FAM_MEMBERS >  0.13
|   |   |   |   |   |   |    |    |    |    |    |    |--- truncated branch of depth 7
|   |   |   |   |   |   |    |    |    |    |--- YEARS_BUILD_AVG >  0.79
|   |   |   |   |   |   |    |    |    |    |    |--- AMT_ANNUITY <= 0.13
|   |   |   |   |   |   |    |    |    |    |    |    |--- class: 0
|   |   |   |   |   |   |    |    |    |    |    |--- AMT_ANNUITY >  0.13
|   |   |   |   |   |   |    |    |    |    |    |    |--- class: 1
|   |   |   |   |   |   |    |    |    |--- NAME_FAMILY_STATUS_Single / not married
>  0.50
|   |   |   |   |   |   |    |    |    |    |--- DAYS_REGISTRATION <= 0.55
|   |   |   |   |   |   |    |    |    |    |    |--- class: 0
|   |   |   |   |   |   |    |    |    |    |--- DAYS_REGISTRATION >  0.55
|   |   |   |   |   |   |    |    |    |    |    |--- class: 1
|   |   |   |   |   |   |    |    |--- SK_ID_CURR >  0.94
```

```
|   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |--- DAYS_EMPLOYED >  0.95
|   |   |   |   |   |--- DAYS_EMPLOYED <= 0.96
|   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <= 0.22
|   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Kindergarten <= 0.50
|   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Security <= 0.50
|   |   |   |   |   |   |   |   |   |--- YEARS_BUILD_MODE <= 0.68
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- YEARS_BUILD_MODE >  0.68
|   |   |   |   |   |   |   |   |   |   |--- NAME_TYPE_SUITE_Unaccompanied <
= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- NAME_TYPE_SUITE_Unaccompanied >
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Security >  0.50
|   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Kindergarten >  0.50
|   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >  0.22
|   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |--- DAYS_EMPLOYED >  0.96
|   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.96
|   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.89
|   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.97
|   |   |   |   |   |   |   |   |   |--- OBS_30_CNT_SOCIAL_CIRCLE <= 0.00
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.07
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 9
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.07
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 7
|   |   |   |   |   |   |   |   |   |--- OBS_30_CNT_SOCIAL_CIRCLE >  0.00
|   |   |   |   |   |   |   |   |   |   |--- APARTMENTS_MODE <= 0.01
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- APARTMENTS_MODE >  0.01
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.97
|   |   |   |   |   |   |   |   |   |--- NONLIVINGAREA_AVG <= 0.00
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.61
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.61
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- NONLIVINGAREA_AVG >  0.00
|   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MODE <=
0.99
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MODE >
0.99
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.89
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.23
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.11
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.11
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.23
|   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.96
|   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.69
|   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.69
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |--- EXT_SOURCE_2 >  0.07
|   |   |   |   |--- AMT_ANNUITY <= 0.05
|   |   |   |   |   |--- EXT_SOURCE_3 <= 0.31
```

```
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.03
|   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.00
|   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.00
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.03
|   |   |   |   |   |   |   |   |--- TOTALAREA_MODE <= 0.01
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <= 0.18
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.03
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.01
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.01
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.03
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.18
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.18
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >  0.18
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- TOTALAREA_MODE >  0.01
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 1.00
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.75
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <=
0.22
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
5
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >
0.22
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 6
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.75
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.82
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.82
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
4
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  1.00
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.31
|   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.00
|   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.58
|   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.58
|   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.31
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.31
|   |   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Civil marriage <
= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Civil marriage >
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.00
|   |   |   |   |   |   |   |   |--- YEARS_BUILD_MEDI <= 0.47
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- YEARS_BUILD_MEDI >  0.47
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 1.00
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.23
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.76
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.76
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 7
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.23
|   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAPARTMENTS_MEDI <= 0.0
```

```
2
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
1
|   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAPARTMENTS_MEDI >  0.0
2
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  1.00
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |--- AMT_ANNUITY >  0.05
|   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.10
|   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.52
|   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.22
|   |   |   |   |   |   |   |   |--- ENTRANCES_MODE <= 0.05
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE <= 0.10
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.30
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.30
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE >  0.10
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- ENTRANCES_MODE >  0.05
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MEDI <= 0.02
|   |   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.00
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.00
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MEDI >  0.02
|   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Security staff
<= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
8
|   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Security staff
>  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.22
|   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.99
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.06
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.27
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 9
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.27
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
1
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.06
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.06
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 8
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.06
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
4
|   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.99
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.83
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.83
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.07
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.07
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.52
|   |   |   |   |   |   |   |   |--- REGION_RATING_CLIENT_W_CITY <= 0.75
|   |   |   |   |   |   |   |   |   |--- OBS_30_CNT_SOCIAL_CIRCLE <= 0.03
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Trade: type 6 <=
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.99
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
0
```

```
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.99
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Trade: type 6 >
0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- OBS_30_CNT_SOCIAL_CIRCLE >  0.03
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- REGION_RATING_CLIENT_W_CITY >  0.75
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <= 0.14
|   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.80
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.33
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.33
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.80
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >  0.14
|   |   |   |   |   |   |   |   |   |   |--- OBS_60_CNT_SOCIAL_CIRCLE <= 0.00
|   |   |   |   |   |   |   |   |   |   |   |--- ENTRANCES_MEDI <= 0.16
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |   |--- ENTRANCES_MEDI >  0.16
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- OBS_60_CNT_SOCIAL_CIRCLE >  0.00
|   |   |   |   |   |   |   |   |   |   |   |--- COMMONAREA_MEDI <= 0.04
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- COMMONAREA_MEDI >  0.04
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.10
|   |   |   |   |   |   |   |--- LIVINGAREA_MEDI <= 0.02
|   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.91
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_AVG <= 0.02
|   |   |   |   |   |   |   |   |   |   |--- ENTRANCES_AVG <= 0.03
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- ENTRANCES_AVG >  0.03
|   |   |   |   |   |   |   |   |   |   |   |--- APARTMENTS_AVG <= 0.01
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 6
|   |   |   |   |   |   |   |   |   |   |   |--- APARTMENTS_AVG >  0.01
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 6
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_AVG >  0.02
|   |   |   |   |   |   |   |   |   |   |--- COMMONAREA_AVG <= 0.02
|   |   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Restaurant <=
0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Restaurant >
0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- COMMONAREA_AVG >  0.02
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.91
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- LIVINGAREA_MEDI >  0.02
|   |   |   |   |   |   |   |   |--- NAME_INCOME_TYPE_Working <= 0.50
|   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_MEDI <= 0.06
|   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <= 0.32
|   |   |   |   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_8 <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_8 >  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >  0.32
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.95
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.95
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_MEDI >  0.06
```

```
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Emergency <= 0.50
|   |   |   |   |   |   |   |   |   |   |    |--- TOTALAREA_MODE <= 0.01
|   |   |   |   |   |   |   |   |   |   |    |    |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |    |--- TOTALAREA_MODE >  0.01
|   |   |   |   |   |   |   |   |   |   |    |    |--- truncated branch of depth 2
4
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Emergency >  0.50
|   |   |   |   |   |   |   |   |   |   |    |--- WEEKDAY_APPR_PROCESS_START_WEDN
ESDAY <= 0.50
|   |   |   |   |   |   |   |   |   |   |    |    |--- class: 1
|   |   |   |   |   |   |   |   |   |   |    |--- WEEKDAY_APPR_PROCESS_START_WEDN
ESDAY >  0.50
|   |   |   |   |   |   |   |   |   |   |    |    |--- class: 0
|   |   |   |   |   |   |   |   |---  NAME_INCOME_TYPE_Working >  0.50
|   |   |   |   |   |   |   |   |    |--- DAYS_REGISTRATION <= 1.00
|   |   |   |   |   |   |   |   |    |    |--- DAYS_BIRTH <= 0.03
|   |   |   |   |   |   |   |   |    |    |    |--- class: 1
|   |   |   |   |   |   |   |   |    |    |--- DAYS_BIRTH >  0.03
|   |   |   |   |   |   |   |   |    |    |    |--- NONLIVINGAREA_AVG <= 0.00
|   |   |   |   |   |   |   |   |    |    |    |    |--- truncated branch of depth 1
1
|   |   |   |   |   |   |   |   |    |    |--- NONLIVINGAREA_AVG >  0.00
|   |   |   |   |   |   |   |   |    |    |    |--- truncated branch of depth 2
1
|   |   |   |   |   |   |   |   |    |--- DAYS_REGISTRATION >  1.00
|   |   |   |   |   |   |   |   |    |    |--- REGION_RATING_CLIENT_W_CITY <= 0.75
|   |   |   |   |   |   |   |   |    |    |    |--- class: 1
|   |   |   |   |   |   |   |   |    |    |--- REGION_RATING_CLIENT_W_CITY >  0.75
|   |   |   |   |   |   |   |   |    |    |    |--- class: 0
|   |   |---  EXT_SOURCE_2 >  0.44
|   |   |    |--- EXT_SOURCE_3 <= 0.16
|   |   |    |    |--- EXT_SOURCE_2 <= 0.74
|   |   |    |    |    |--- EXT_SOURCE_1 <= 0.27
|   |   |    |    |    |    |--- DAYS_BIRTH <= 0.36
|   |   |    |    |    |    |    |--- EXT_SOURCE_3 <= 0.06
|   |   |    |    |    |    |    |    |--- CNT_FAM_MEMBERS <= 0.08
|   |   |    |    |    |    |    |    |    |--- DAYS_ID_PUBLISH <= 0.48
|   |   |    |    |    |    |    |    |    |    |--- class: 1
|   |   |    |    |    |    |    |    |    |--- DAYS_ID_PUBLISH >  0.48
|   |   |    |    |    |    |    |    |    |    |--- DAYS_REGISTRATION <= 0.89
|   |   |    |    |    |    |    |    |    |    |    |--- COMMONAREA_MEDI <= 0.14
|   |   |    |    |    |    |    |    |    |    |    |    |--- truncated branch of depth 2
|   |   |    |    |    |    |    |    |    |    |    |--- COMMONAREA_MEDI >  0.14
|   |   |    |    |    |    |    |    |    |    |    |    |--- class: 1
|   |   |    |    |    |    |    |    |    |    |--- DAYS_REGISTRATION >  0.89
|   |   |    |    |    |    |    |    |    |    |    |--- SK_ID_CURR <= 0.78
|   |   |    |    |    |    |    |    |    |    |    |    |--- truncated branch of depth 2
|   |   |    |    |    |    |    |    |    |    |    |--- SK_ID_CURR >  0.78
|   |   |    |    |    |    |    |    |    |    |    |    |--- class: 0
|   |   |    |    |    |    |    |    |---  CNT_FAM_MEMBERS >  0.08
|   |   |    |    |    |    |    |    |    |--- REGION_POPULATION_RELATIVE <= 0.31
|   |   |    |    |    |    |    |    |    |    |--- class: 1
|   |   |    |    |    |    |    |    |    |--- REGION_POPULATION_RELATIVE >  0.31
|   |   |    |    |    |    |    |    |    |    |--- ORGANIZATION_TYPE_Kindergarten <=
0.50
|   |   |    |    |    |    |    |    |    |    |    |--- class: 0
|   |   |    |    |    |    |    |    |    |    |--- ORGANIZATION_TYPE_Kindergarten >
0.50
|   |   |    |    |    |    |    |    |    |    |    |--- class: 1
|   |   |    |    |    |    |    |---  EXT_SOURCE_3 >  0.06
|   |   |    |    |    |    |    |    |--- AMT_ANNUITY <= 0.07
|   |   |    |    |    |    |    |    |    |--- EXT_SOURCE_2 <= 0.73
|   |   |    |    |    |    |    |    |    |    |--- ORGANIZATION_TYPE_Trade: type 3 <=
0.50
```

```
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Transport: ty
pe 4 <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 8
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Transport: ty
pe 4 >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Trade: type 3 >
0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.73
|   |   |   |   |   |   |   |   |   |--- TOTALAREA_MODE <= 0.06
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- TOTALAREA_MODE >  0.06
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.07
|   |   |   |   |   |   |   |   |   |--- APARTMENTS_AVG <= 0.07
|   |   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE <= 0.13
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.60
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.60
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE >  0.13
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- APARTMENTS_AVG >  0.07
|   |   |   |   |   |   |   |   |   |   |--- COMMONAREA_MEDI <= 0.02
|   |   |   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_MODE <= 0.08
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
0
|   |   |   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_MODE >  0.08
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- COMMONAREA_MEDI >  0.02
|   |   |   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE <= 0.71
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE >  0.71
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- DAYS_BIRTH >  0.36
|   |   |   |   |   |   |   |--- APARTMENTS_MEDI <= 0.08
|   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <= 0.28
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >  0.28
|   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.96
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.96
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- APARTMENTS_MEDI >  0.08
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.07
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.68
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.68
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.07
|   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.00
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.07
|   |   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <=
0.25
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >
0.25
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.07
|   |   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <=
0.32
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >
```

```
0.32
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.00
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Industry: type 1
<= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Industry: type 1
>  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |--- EXT_SOURCE_1 >  0.27
|   |   |   |   |   |--- NAME_CONTRACT_TYPE <= 0.50
|   |   |   |   |   |   |--- OBS_60_CNT_SOCIAL_CIRCLE <= 0.02
|   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.10
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.01
|   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.19
|   |   |   |   |   |   |   |   |   |   |--- NAME_TYPE_SUITE_Unaccompanied <
= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- NAME_TYPE_SUITE_Unaccompanied >
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.19
|   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.97
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
1
|   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.97
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.01
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.05
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <=
0.10
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 9
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >
0.10
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 6
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.05
|   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Low-skill Labor
ers <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
9
|   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Low-skill Labor
ers >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.10
|   |   |   |   |   |   |   |   |--- TOTALAREA_MODE <= 0.10
|   |   |   |   |   |   |   |   |   |--- BASEMENTAREA_AVG <= 0.08
|   |   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE <= 0.09
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
3
|   |   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE >  0.09
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
0
|   |   |   |   |   |   |   |   |   |--- BASEMENTAREA_AVG >  0.08
|   |   |   |   |   |   |   |   |   |   |--- BASEMENTAREA_MEDI <= 0.11
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 9
|   |   |   |   |   |   |   |   |   |   |--- BASEMENTAREA_MEDI >  0.11
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |--- TOTALAREA_MODE >  0.10
|   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.14
|   |   |   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_16 <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 8
|   |   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_16 >  0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.14
```

```
|   |   |   |   |   |   |   |   |   |   |--- FLOORSMAX_AVG <= 0.54
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 6
|   |   |   |   |   |   |   |   |   |   |--- FLOORSMAX_AVG >  0.54
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |--- OBS_60_CNT_SOCIAL_CIRCLE >  0.02
|   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <= 0.06
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >  0.06
|   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MODE <= 0.98
|   |   |   |   |   |   |   |   |   |   |--- FLOORSMIN_AVG <= 0.06
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- FLOORSMIN_AVG >  0.06
|   |   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.43
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 6
|   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.43
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 7
|   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MODE >  0.98
|   |   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Higher educatio
n <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.56
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.56
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Higher educatio
n >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- ENTRANCES_MODE <= 0.26
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- ENTRANCES_MODE >  0.26
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- NAME_CONTRACT_TYPE >  0.50
|   |   |   |   |   |   |   |   |--- APARTMENTS_AVG <= 0.35
|   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Laborers <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.93
|   |   |   |   |   |   |   |   |   |   |   |--- FLOORSMIN_MEDI <= 0.02
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- FLOORSMIN_MEDI >  0.02
|   |   |   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_HOUR <=
0.12
|   |   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 9
|   |   |   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_HOUR >
0.12
|   |   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.93
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.78
|   |   |   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAREA_MODE <= 0.00
|   |   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAREA_MODE >  0.00
|   |   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.78
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.69
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.69
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Laborers >  0.50
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.11
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <=
0.14
|   |   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >
0.14
|   |   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE <= 0.09
```

```
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE >  0.09
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.11
|   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- APARTMENTS_AVG >  0.35
|   |   |   |   |   |   |   |   |--- CODE_GENDER_M <= 0.50
|   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- CODE_GENDER_M >  0.50
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |--- EXT_SOURCE_2 >  0.74
|   |   |   |   |   |--- EXT_SOURCE_1 <= 0.72
|   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.06
|   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.84
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.84
|   |   |   |   |   |   |   |   |--- FLOORSMIN_MODE <= 0.29
|   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- FLOORSMIN_MODE >  0.29
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.06
|   |   |   |   |   |   |   |--- YEARS_BUILD_MEDI <= 0.85
|   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.06
|   |   |   |   |   |   |   |   |   |--- YEARS_BUILD_MODE <= 0.48
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- YEARS_BUILD_MODE >  0.48
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_QRT <= 0.01
|   |   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Sales staff <=
0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 8
|   |   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Sales staff >
0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_QRT >  0.01
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.95
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.95
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.06
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Agriculture <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.01
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.06
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.06
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
1
|   |   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.01
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Agriculture >  0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- YEARS_BUILD_MEDI >  0.85
|   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.99
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_QRT <= 0.01
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.98
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.98
|   |   |   |   |   |   |   |   |   |   |   |--- LANDAREA_AVG <= 0.04
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- LANDAREA_AVG >  0.04
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_QRT >  0.01
|   |   |   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_3 <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_3 >  0.50
```

```
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |---  DAYS_EMPLOYED >  0.99
|   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MODE <= 0.99
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MODE >  0.99
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |---  EXT_SOURCE_1 >  0.72
|   |   |   |   |   |--- ORGANIZATION_TYPE_Industry: type 4 <= 0.50
|   |   |   |   |   |   |--- LIVINGAPARTMENTS_MEDI <= 0.00
|   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- LIVINGAPARTMENTS_MEDI >  0.00
|   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Private service staff <= 0.
50
|   |   |   |   |   |   |   |   |--- NAME_HOUSING_TYPE_Rented apartment <=
0.50
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_HOUR <= 0.12
|   |   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.02
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.02
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_HOUR >  0.12
|   |   |   |   |   |   |   |   |   |   |--- LIVE_REGION_NOT_WORK_REGION <=
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- LIVE_REGION_NOT_WORK_REGION >
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- NAME_HOUSING_TYPE_Rented apartment >
0.50
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Private service staff >  0.
50
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |--- ORGANIZATION_TYPE_Industry: type 4 >  0.50
|   |   |   |   |   |   |--- class: 1
|   |   |---  EXT_SOURCE_3 >  0.16
|   |   |   |--- EXT_SOURCE_1 <= 0.20
|   |   |   |   |--- EXT_SOURCE_1 <= 0.03
|   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.89
|   |   |   |   |   |   |--- CNT_CHILDREN <= 0.03
|   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.07
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.07
|   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |--- CNT_CHILDREN >  0.03
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.01
|   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.01
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.89
|   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <= 0.15
|   |   |   |   |   |   |   |--- LIVINGAREA_MODE <= 0.02
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- LIVINGAREA_MODE >  0.02
|   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >  0.15
|   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |---  EXT_SOURCE_1 >  0.03
|   |   |   |   |   |--- DAYS_BIRTH <= 0.13
|   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.51
|   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.51
|   |   |   |   |   |   |   |--- FLOORSMAX_MEDI <= 0.10
|   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Married <= 0.50
```

```
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE <= 0.01
|   |   |   |   |   |   |   |   |   |   |   |--- OBS_30_CNT_SOCIAL_CIRCLE <= 0.0
1
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- OBS_30_CNT_SOCIAL_CIRCLE >  0.0
1
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE >  0.01
|   |   |   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START <= 0.30
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START >  0.30
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Married >  0.50
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.07
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.07
|   |   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Core staff <=
0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Core staff >
0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- FLOORSMAX_MEDI >  0.10
|   |   |   |   |   |   |   |   |   |--- COMMONAREA_MODE <= 0.28
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.04
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.04
|   |   |   |   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_6 <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
2
|   |   |   |   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_6 >  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- COMMONAREA_MODE >  0.28
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |--- DAYS_BIRTH >  0.13
|   |   |   |   |   |   |--- NAME_CONTRACT_TYPE <= 0.50
|   |   |   |   |   |   |   |--- COMMONAREA_AVG <= 0.00
|   |   |   |   |   |   |   |   |--- LANDAREA_MEDI <= 0.03
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- LANDAREA_MEDI >  0.03
|   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.19
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.19
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Industry: typ
e 1 <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Industry: typ
e 1 >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- COMMONAREA_AVG >  0.00
|   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.28
|   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.89
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.16
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.16
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
4
|   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.89
|   |   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE <= 0.15
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
1
|   |   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE >  0.15
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.28
```

```
|   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.47
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.47
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.33
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
7
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.33
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |--- NAME_CONTRACT_TYPE >  0.50
|   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.55
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.55
|   |   |   |   |   |   |   |   |   |--- NAME_INCOME_TYPE_Pensioner <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_HOUR <= 0.12
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_HOUR >  0.12
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- NAME_INCOME_TYPE_Pensioner >  0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |--- EXT_SOURCE_1 >  0.20
|   |   |   |   |   |--- EXT_SOURCE_2 <= 0.76
|   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.52
|   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.91
|   |   |   |   |   |   |   |   |--- BASEMENTAREA_AVG <= 0.91
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Trade: type 3 <= 0.50
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Business Entity T
ype 2 <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- DEF_60_CNT_SOCIAL_CIRCLE <= 0.0
6
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
0
|   |   |   |   |   |   |   |   |   |   |--- DEF_60_CNT_SOCIAL_CIRCLE >  0.0
6
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 9
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Business Entity T
ype 2 >  0.50
|   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.76
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
0
|   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.76
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
0
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Trade: type 3 >  0.50
|   |   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.10
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.65
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.65
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.10
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- BASEMENTAREA_AVG >  0.91
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.91
|   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.18
|   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.91
|   |   |   |   |   |   |   |   |   |   |--- NAME_CONTRACT_TYPE <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- NAME_CONTRACT_TYPE >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.91
|   |   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Secondary / sec
ondary special <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Kindergarten
<= 0.50
```

```
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
1
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Kindergarten
>  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Secondary / sec
ondary special >  0.50
|   |   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START <= 0.24
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START >  0.24
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
6
|   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.18
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.29
|   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MEDI <= 0.9
8
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.08
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
8
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.08
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
3
|   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MEDI >  0.9
8
|   |   |   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Lower secon
dary <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
7
|   |   |   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Lower secon
dary >  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.29
|   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.20
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.89
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.89
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.20
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.09
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
0
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.09
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
1
|   |   |   |   |   |--- EXT_SOURCE_1 >  0.52
|   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.45
|   |   |   |   |   |   |   |--- COMMONAREA_MODE <= 0.01
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- COMMONAREA_MODE >  0.01
|   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.51
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.51
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.45
|   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_MEDI <= 0.05
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_MEDI >  0.05
|   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.45
|   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_MEDI <= 0.10
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_MEDI >  0.10
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.45
|   |   |   |   |   |   |   |--- LIVINGAREA_MODE <= 0.01
```

```
|   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.12
|   |   |   |   |   |   |   |   |   |--- BASEMENTAREA_MEDI <= 0.01
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- BASEMENTAREA_MEDI >  0.01
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.12
|   |   |   |   |   |   |   |   |   |--- CNT_FAM_MEMBERS <= 0.08
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.34
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.34
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- CNT_FAM_MEMBERS >  0.08
|   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.63
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.63
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- LIVINGAREA_MODE >  0.01
|   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Realtor <= 0.50
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Transport: type 3
<= 0.50
|   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 1.00
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
9
|   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  1.00
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Transport: type 3
>  0.50
|   |   |   |   |   |   |   |   |   |   |--- NAME_INCOME_TYPE_Commercial ass
ociate <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- NAME_INCOME_TYPE_Commercial ass
ociate >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Realtor >  0.50
|   |   |   |   |   |   |   |   |   |--- YEARS_BUILD_MODE <= 0.69
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- YEARS_BUILD_MODE >  0.69
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.71
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.71
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |--- EXT_SOURCE_2 >  0.76
|   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.94
|   |   |   |   |   |   |   |--- ENTRANCES_MEDI <= 0.84
|   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_AVG <= 0.05
|   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Waiters/barmen staff <=
0.50
|   |   |   |   |   |   |   |   |   |   |--- APARTMENTS_AVG <= 0.24
|   |   |   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE <= 0.14
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
7
|   |   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE >  0.14
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |--- APARTMENTS_AVG >  0.24
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Waiters/barmen staff >
0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_AVG >  0.05
|   |   |   |   |   |   |   |   |--- YEARS_BUILD_MODE <= 0.01
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- YEARS_BUILD_MODE >  0.01
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.55
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Advertising <
```

```
= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
1
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Advertising >
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.55
|   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.99
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
3
|   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.99
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- ENTRANCES_MEDI >  0.84
|   |   |   |   |   |   |   |--- NONLIVINGAREA_MODE <= 0.00
|   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- NONLIVINGAREA_MODE >  0.00
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |--- DAYS_EMPLOYED >  0.94
|   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.64
|   |   |   |   |   |   |   |--- ELEVATORS_AVG <= 0.02
|   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.95
|   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.47
|   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.01
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.01
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
1
|   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.47
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Construction
<= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
6
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Construction
>  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.95
|   |   |   |   |   |   |   |   |   |   |--- WALLSMATERIAL_MODE_Stone, brick <=
0.50
|   |   |   |   |   |   |   |   |   |   |--- WEEKDAY_APPR_PROCESS_START_SATU
RDAY <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |--- WEEKDAY_APPR_PROCESS_START_SATU
RDAY >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- WALLSMATERIAL_MODE_Stone, brick >
0.50
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.97
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.97
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |--- ELEVATORS_AVG >  0.02
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.17
|   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.00
|   |   |   |   |   |   |   |   |   |   |--- CNT_FAM_MEMBERS <= 0.13
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- CNT_FAM_MEMBERS >  0.13
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.00
|   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Managers <= 0.5
0
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Managers >  0.5
0
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
```

```
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.17
|   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.20
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.20
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Mobile <= 0.5
0
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 9
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Mobile >  0.5
0
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.64
|   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.00
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.00
|   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.01
|   |   |   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_14 <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.04
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.04
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_14 >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- FLAG_PHONE <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- FLAG_PHONE >  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.01
|   |   |   |   |   |   |   |   |   |   |--- ENTRANCES_MODE <= 0.16
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- ENTRANCES_MODE >  0.16
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|---- EXT_SOURCE_3 >  0.35
|   |--- EXT_SOURCE_2 <= 0.46
|   |   |--- EXT_SOURCE_3 <= 0.64
|   |   |   |--- EXT_SOURCE_2 <= 0.18
|   |   |   |   |--- CODE_GENDER_F <= 0.50
|   |   |   |   |   |--- DAYS_EMPLOYED <= 0.91
|   |   |   |   |   |   |--- FLAG_DOCUMENT_3 <= 0.50
|   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.01
|   |   |   |   |   |   |   |   |--- FLAG_OWN_REALTY <= 0.50
|   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.06
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.06
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- FLAG_OWN_REALTY >  0.50
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.01
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.17
|   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.37
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.37
|   |   |   |   |   |   |   |   |   |   |--- NAME_INCOME_TYPE_Working <= 0.5
0
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- NAME_INCOME_TYPE_Working >  0.5
0
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.17
|   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.35
|   |   |   |   |   |   |   |   |   |   |--- REGION_RATING_CLIENT_W_CITY <=
0.75
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- REGION_RATING_CLIENT_W_CITY >
0.75
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
```

```
|   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.35
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.38
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.38
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
8
|   |   |   |   |   |   |--- FLAG_DOCUMENT_3 >  0.50
|   |   |   |   |   |   |   |--- COMMONAREA_MEDI <= 0.02
|   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 1.00
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Agriculture <= 0.
50
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Agriculture >  0.
50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  1.00
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.90
|   |   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <=
0.37
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >
0.37
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.90
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- COMMONAREA_MEDI >  0.02
|   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Single / not married
<= 0.50
|   |   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.00
|   |   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <=
0.26
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >
0.26
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.00
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.91
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
5
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.91
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 7
|   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Single / not married
>  0.50
|   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.10
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.10
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.35
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.35
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 9
|   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.91
|   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.03
|   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.91
|   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MODE <= 0.99
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MODE >  0.99
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.91
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_AVG <= 0.05
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.17
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.94
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.94
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
```

```
|   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.17
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_AVG >  0.05
|   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.95
|   |   |   |   |   |   |   |   |   |   |   |--- DEF_60_CNT_SOCIAL_CIRCLE <= 0.0
2
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 9
|   |   |   |   |   |   |   |   |   |   |   |--- DEF_60_CNT_SOCIAL_CIRCLE >  0.0
2
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.95
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.96
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.96
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.03
|   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.05
|   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.03
|   |   |   |   |   |   |   |   |   |   |--- NAME_HOUSING_TYPE_House / apartment
<= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- OBS_60_CNT_SOCIAL_CIRCLE <= 0.0
0
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- OBS_60_CNT_SOCIAL_CIRCLE >  0.0
0
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- NAME_HOUSING_TYPE_House / apartment
>  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.84
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.84
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.03
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <= 0.26
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.88
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 7
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.88
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >  0.26
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.05
|   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.07
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.92
|   |   |   |   |   |   |   |   |   |   |   |--- NAME_TYPE_SUITE_Spouse, partner
<= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
0
|   |   |   |   |   |   |   |   |   |   |   |--- NAME_TYPE_SUITE_Spouse, partner
>  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.92
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.06
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.06
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.07
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.97
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.40
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
0
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.40
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
3
|   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.97
```

```
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.35
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.35
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
8
|   |   |   |   |--- CODE_GENDER_F >  0.50
|   |   |   |   |   |--- EXT_SOURCE_1 <= 0.10
|   |   |   |   |   |   |--- BASEMENTAREA_MEDI <= 0.08
|   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.04
|   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.98
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.98
|   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.04
|   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.79
|   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.72
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <=
0.06
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >
0.06
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.72
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.79
|   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.96
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.05
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.05
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.96
|   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <=
0.09
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >
0.09
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- BASEMENTAREA_MEDI >  0.08
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |--- EXT_SOURCE_1 >  0.10
|   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.92
|   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.01
|   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.00
|   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.05
|   |   |   |   |   |   |   |   |   |   |--- LIVE_CITY_NOT_WORK_CITY <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- LIVE_CITY_NOT_WORK_CITY >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.05
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.16
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.16
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.00
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.73
|   |   |   |   |   |   |   |   |   |   |--- DEF_30_CNT_SOCIAL_CIRCLE <= 0.0
4
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- DEF_30_CNT_SOCIAL_CIRCLE >  0.0
4
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.73
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.92
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
```

```
0
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.92
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.01
|   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.69
|   |   |   |   |   |   |   |   |   |--- REG_CITY_NOT_LIVE_CITY <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.08
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
4
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.08
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
5
|   |   |   |   |   |   |   |   |   |--- REG_CITY_NOT_LIVE_CITY >  0.50
|   |   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Civil marria
ge <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 7
|   |   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Civil marria
ge >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.69
|   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.99
|   |   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <=
0.02
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >
0.02
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
0
|   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.99
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <=
0.14
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >
0.14
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.92
|   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Secondary / secondary s
pecial <= 0.50
|   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Laborers <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- BASEMENTAREA_AVG <= 0.00
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.47
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.47
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- BASEMENTAREA_AVG >  0.00
|   |   |   |   |   |   |   |   |   |   |   |--- ENTRANCES_AVG <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
6
|   |   |   |   |   |   |   |   |   |   |   |--- ENTRANCES_AVG >  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Laborers >  0.50
|   |   |   |   |   |   |   |   |   |   |--- APARTMENTS_MEDI <= 0.10
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.27
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.27
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- APARTMENTS_MEDI >  0.10
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Secondary / secondary s
pecial >  0.50
|   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.23
|   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAREA_AVG <= 0.02
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.01
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
```

```
2
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.01
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
1
|   |   |   |   |   |   |   |   |   |--- NONLIVINGAREA_AVG >  0.02
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Government <=
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 9
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Government >
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.23
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.63
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.97
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.97
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.63
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |--- EXT_SOURCE_2 >  0.18
|   |   |   |   |   |--- DAYS_EMPLOYED <= 0.91
|   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.24
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.23
|   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.00
|   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.13
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.64
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.64
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.19
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.19
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.13
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.00
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Bank <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_6 <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START <= 0.24
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START >  0.24
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
6
|   |   |   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_6 >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.89
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.89
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Bank >  0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.23
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.24
|   |   |   |   |   |   |   |--- CODE_GENDER_M <= 0.50
|   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.44
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_WEEK <= 0.44
|   |   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START <= 0.11
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START >  0.11
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.00
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
6
|   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_WEEK >  0.44
```

```
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |---  DAYS_ID_PUBLISH >  0.44
|   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_MEDI <= 0.52
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- COMMONAREA_AVG <= 0.35
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
4
|   |   |   |   |   |   |   |   |   |   |   |--- COMMONAREA_AVG >  0.35
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |---  EXT_SOURCE_3 >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MEDI <= 0.07
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
5
|   |   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MEDI >  0.07
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
3
|   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_MEDI >  0.52
|   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAPARTMENTS_AVG <= 0.15
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |---  NONLIVINGAPARTMENTS_AVG >  0.15
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |---  CODE_GENDER_M >  0.50
|   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Married <= 0.50
|   |   |   |   |   |   |   |   |   |--- REG_CITY_NOT_LIVE_CITY <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE <= 0.09
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.01
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.01
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 6
|   |   |   |   |   |   |   |   |   |   |---  OWN_CAR_AGE >  0.09
|   |   |   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START <= 0.41
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
7
|   |   |   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START >  0.41
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
9
|   |   |   |   |   |   |   |   |   |--- REG_CITY_NOT_LIVE_CITY >  0.50
|   |   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Secondary / sec
ondary special <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Security Mini
stries <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Security Mini
stries >  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |---  NAME_EDUCATION_TYPE_Secondary / sec
ondary special >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MEDI <=
0.98
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MEDI >
0.98
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
0
|   |   |   |   |   |   |   |   |---  NAME_FAMILY_STATUS_Married >  0.50
|   |   |   |   |   |   |   |   |   |--- DEF_60_CNT_SOCIAL_CIRCLE <= 0.10
|   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAPARTMENTS_MODE <= 0.15
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.07
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
3
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.07
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
5
|   |   |   |   |   |   |   |   |   |   |---  NONLIVINGAPARTMENTS_MODE >  0.15
```

```
|   |   |   |   |   |   |   |   |   |   |--- ELEVATORS_MODE <= 0.26
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- ELEVATORS_MODE >  0.26
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- DEF_60_CNT_SOCIAL_CIRCLE >  0.10
|   |   |   |   |   |   |   |   |   |   |--- FLAG_PHONE <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- BASEMENTAREA_MEDI <= 0.04
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- BASEMENTAREA_MEDI >  0.04
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- FLAG_PHONE >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |--- DAYS_EMPLOYED >  0.91
|   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.53
|   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Secondary / secondary speci
al <= 0.50
|   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.91
|   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.14
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.14
|   |   |   |   |   |   |   |   |   |   |--- REG_CITY_NOT_LIVE_CITY <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- REG_CITY_NOT_LIVE_CITY >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.91
|   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.18
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.33
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
5
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.33
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.11
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.11
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
5
|   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.18
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.18
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.57
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.57
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.18
|   |   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Self-employed
<= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
2
|   |   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Self-employed
>  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
4
|   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Secondary / secondary speci
al >  0.50
|   |   |   |   |   |   |   |   |--- REGION_RATING_CLIENT_W_CITY <= 0.75
|   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.73
|   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.56
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.12
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.12
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.56
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.22
```

```
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
7
|   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.22
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
1
|   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.73
|   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.20
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.52
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
6
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.52
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
6
|   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.20
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.14
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 7
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.14
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
3
|   |   |   |   |   |   |   |--- REGION_RATING_CLIENT_W_CITY >  0.75
|   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.11
|   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.06
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Industry: typ
e 1 <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
9
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Industry: typ
e 1 >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.06
|   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.05
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.05
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
0
|   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.11
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_AVG <= 0.00
|   |   |   |   |   |   |   |   |   |   |--- NAME_INCOME_TYPE_Commercial ass
ociate <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- NAME_INCOME_TYPE_Commercial ass
ociate >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_AVG >  0.00
|   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.49
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.49
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
3
|   |   |   |   |   |--- EXT_SOURCE_1 >  0.53
|   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.27
|   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.27
|   |   |   |   |   |   |   |   |--- FLOORSMIN_MEDI <= 0.62
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.94
|   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Medicine staff
<= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
1
|   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Medicine staff
>  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.94
|   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Drivers <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
```

```
0
|   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Drivers >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- FLOORSMIN_MEDI >  0.62
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.27
|   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Drivers <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Drivers >  0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.27
|   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Waiters/barmen staff <= 0.5
0
|   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START <= 0.15
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <= 0.06
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >  0.06
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START >  0.15
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_MODE <= 0.02
|   |   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.90
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.90
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_MODE >  0.02
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.93
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
3
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.93
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
3
|   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Waiters/barmen staff >  0.5
0
|   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.10
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.10
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |--- EXT_SOURCE_3 >  0.64
|   |   |   |   |--- EXT_SOURCE_2 <= 0.17
|   |   |   |   |   |--- DAYS_BIRTH <= 0.59
|   |   |   |   |   |   |--- AMT_ANNUITY <= 0.04
|   |   |   |   |   |   |   |--- NONLIVINGAPARTMENTS_MODE <= 0.04
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.17
|   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE <= 0.27
|   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.53
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.17
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 7
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.17
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.53
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.04
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.04
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE >  0.27
|   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <= 0.13
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >  0.13
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.17
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- NONLIVINGAPARTMENTS_MODE >  0.04
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- AMT_ANNUITY >  0.04
```

```
|   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.07
|   |   |   |   |   |   |   |   |--- LIVINGAREA_MEDI <= 0.00
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- LIVINGAREA_MEDI >  0.00
|   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START <= 0.54
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <= 0.02
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.43
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 6
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.43
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >  0.02
|   |   |   |   |   |   |   |   |   |   |   |--- ENTRANCES_MODE <= 0.05
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |   |--- ENTRANCES_MODE >  0.05
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
1
|   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START >  0.54
|   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_AVG <= 0.97
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_AVG >  0.97
|   |   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE <= 0.12
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 9
|   |   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE >  0.12
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.07
|   |   |   |   |   |   |   |   |--- REG_CITY_NOT_LIVE_CITY <= 0.50
|   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.16
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.17
|   |   |   |   |   |   |   |   |   |   |   |--- APARTMENTS_MODE <= 0.15
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
1
|   |   |   |   |   |   |   |   |   |   |   |--- APARTMENTS_MODE >  0.15
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.17
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.16
|   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.59
|   |   |   |   |   |   |   |   |   |   |   |--- NAME_TYPE_SUITE_Other_A <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 8
|   |   |   |   |   |   |   |   |   |   |   |--- NAME_TYPE_SUITE_Other_A >  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.59
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- REG_CITY_NOT_LIVE_CITY >  0.50
|   |   |   |   |   |   |   |   |   |--- REGION_RATING_CLIENT_W_CITY <= 0.75
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.12
|   |   |   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Separated <=
0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Separated >
0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.12
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.64
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.64
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |--- REGION_RATING_CLIENT_W_CITY >  0.75
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <= 0.14
|   |   |   |   |   |   |   |   |   |   |   |--- NAME_INCOME_TYPE_Commercial ass
ociate <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |   |   |--- NAME_INCOME_TYPE_Commercial ass
ociate >  0.50
```

```
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >  0.14
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |--- DAYS_BIRTH >  0.59
|   |   |   |   |   |--- OCCUPATION_TYPE_Drivers <= 0.50
|   |   |   |   |   |   |--- LANDAREA_MODE <= 0.59
|   |   |   |   |   |   |   |--- YEARS_BUILD_AVG <= 0.11
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- YEARS_BUILD_AVG >  0.11
|   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 1.00
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.18
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.06
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.06
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.18
|   |   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Incomplete
higher <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
2
|   |   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Incomplete
higher >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  1.00
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- LANDAREA_MODE >  0.59
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |--- OCCUPATION_TYPE_Drivers >  0.50
|   |   |   |   |   |   |--- WALLSMATERIAL_MODE_Stone, brick <= 0.50
|   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.00
|   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Self-employed <= 0.50
|   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.35
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.40
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.40
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.35
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Self-employed >  0.50
|   |   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_8 <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_8 >  0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.00
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- WALLSMATERIAL_MODE_Stone, brick >  0.50
|   |   |   |   |   |   |   |--- class: 1
|   |   |   |--- EXT_SOURCE_2 >  0.17
|   |   |   |   |--- CODE_GENDER_F <= 0.50
|   |   |   |   |   |--- DAYS_EMPLOYED <= 0.96
|   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.75
|   |   |   |   |   |   |   |--- ENTRANCES_MEDI <= 0.67
|   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Kindergarten <= 0.50
|   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START <= 0.85
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Transport: ty
pe 3 <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 9
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Transport: ty
pe 3 >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START >  0.85
|   |   |   |   |   |   |   |   |   |   |--- APARTMENTS_MODE <= 0.05
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- APARTMENTS_MODE >  0.05
```

```
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Kindergarten >  0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- ENTRANCES_MEDI >  0.67
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.75
|   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.17
|   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.76
|   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.66
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.66
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.76
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.05
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.76
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.76
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
3
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.05
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.69
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
7
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.69
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
1
|   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.17
|   |   |   |   |   |   |   |   |   |--- YEARS_BUILD_MODE <= 0.06
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- YEARS_BUILD_MODE >  0.06
|   |   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Separated <= 0.5
0
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 1.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
3
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  1.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Separated >  0.5
0
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.83
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.83
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.96
|   |   |   |   |   |   |   |   |--- FLAG_OWN_CAR <= 0.50
|   |   |   |   |   |   |   |   |   |--- NAME_HOUSING_TYPE_With parents <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- WALLSMATERIAL_MODE_Wooden <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Transport: type 3
<= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.05
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.05
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
9
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Transport: type 3
>  0.50
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.07
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.07
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- WALLSMATERIAL_MODE_Wooden >  0.50
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_AVG <= 0.01
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_AVG >  0.01
```

```
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |---  NAME_HOUSING_TYPE_With parents >  0.50
|   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <= 0.09
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >  0.09
|   |   |   |   |   |   |   |   |   |   |--- WEEKDAY_APPR_PROCESS_START_MONDAY <
= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.87
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.87
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- WEEKDAY_APPR_PROCESS_START_MONDAY >
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |---  FLAG_OWN_CAR >  0.50
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.16
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.14
|   |   |   |   |   |   |   |   |   |   |--- FLOORSMIN_AVG <= 0.08
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- FLOORSMIN_AVG >  0.08
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.14
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.32
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.32
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |---  EXT_SOURCE_1 >  0.16
|   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <= 0.09
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.96
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <=
0.10
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >
0.10
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.96
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >  0.09
|   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 1.00
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 1.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
0
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  1.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  1.00
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.34
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.34
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |---  CODE_GENDER_F >  0.50
|   |   |   |   |   |--- EXT_SOURCE_1 <= 0.36
|   |   |   |   |   |   |--- DAYS_REGISTRATION <= 1.00
|   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_MEDI <= 0.00
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |---  LIVINGAPARTMENTS_MEDI >  0.00
|   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.41
|   |   |   |   |   |   |   |   |   |--- ENTRANCES_MEDI <= 0.02
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- ENTRANCES_MEDI >  0.02
|   |   |   |   |   |   |   |   |   |   |--- LANDAREA_AVG <= 0.66
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
8
|   |   |   |   |   |   |   |   |   |   |--- LANDAREA_AVG >  0.66
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
```

```
|   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.41
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  1.00
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.27
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.27
|   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.13
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.13
|   |   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START <= 0.28
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START >  0.28
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.36
|   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.06
|   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 1.00
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 1.00
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.18
|   |   |   |   |   |   |   |   |   |   |   |--- OBS_60_CNT_SOCIAL_CIRCLE <= 0.0
1
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |   |--- OBS_60_CNT_SOCIAL_CIRCLE >  0.0
1
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.18
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.98
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
5
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.98
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 6
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  1.00
|   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAREA_AVG <= 0.05
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAREA_AVG >  0.05
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  1.00
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- AMT_CREDIT >  0.06
|   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.06
|   |   |   |   |   |   |   |   |   |--- WEEKDAY_APPR_PROCESS_START_THURSDAY <=
0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- WEEKDAY_APPR_PROCESS_START_THURSDAY >
0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.06
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <= 0.42
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.03
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.88
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.88
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.03
|   |   |   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START <= 0.98
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
8
|   |   |   |   |   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START >  0.98
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >  0.42
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_AVG <= 0.06
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_AVG >  0.06
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |--- EXT_SOURCE_2 >  0.46
```

```
|   |   |--- EXT_SOURCE_3 <= 0.61
|   |   |   |--- EXT_SOURCE_2 <= 0.72
|   |   |   |   |--- EXT_SOURCE_1 <= 0.52
|   |   |   |   |   |--- DAYS_EMPLOYED <= 0.92
|   |   |   |   |   |   |--- CODE_GENDER_F <= 0.50
|   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.86
|   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.10
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.10
|   |   |   |   |   |   |   |   |   |--- FLAG_OWN_CAR <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- DEF_30_CNT_SOCIAL_CIRCLE <= 0.0
1
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
2
|   |   |   |   |   |   |   |   |   |   |--- DEF_30_CNT_SOCIAL_CIRCLE >  0.0
1
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 9
|   |   |   |   |   |   |   |   |   |--- FLAG_OWN_CAR >  0.50
|   |   |   |   |   |   |   |   |   |   |--- CNT_CHILDREN <= 0.18
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
6
|   |   |   |   |   |   |   |   |   |   |--- CNT_CHILDREN >  0.18
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.86
|   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_3 <= 0.50
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 1.00
|   |   |   |   |   |   |   |   |   |   |--- DEF_60_CNT_SOCIAL_CIRCLE <= 0.1
0
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
5
|   |   |   |   |   |   |   |   |   |   |--- DEF_60_CNT_SOCIAL_CIRCLE >  0.1
0
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  1.00
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_3 >  0.50
|   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.11
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.10
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
7
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.10
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
7
|   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.11
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MEDI <= 0.00
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MEDI >  0.00
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
4
|   |   |   |   |   |   |--- CODE_GENDER_F >  0.50
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.27
|   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.53
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.53
|   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.00
|   |   |   |   |   |   |   |   |   |   |--- YEARS_BUILD_MEDI <= 0.46
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |--- YEARS_BUILD_MEDI >  0.46
|   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
2
|   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.00
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.27
|   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.53
```

```
|   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Higher educatio
n <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Legal Service
s <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
6
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Legal Service
s >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Higher educatio
n >  0.50
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE <= 0.00
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE >  0.00
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
9
|   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.53
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.52
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.06
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
3
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.06
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
3
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.52
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |--- DAYS_EMPLOYED >  0.92
|   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Secondary / secondary speci
al <= 0.50
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.02
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.02
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.12
|   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Incomplete high
er <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.87
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 7
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.87
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Incomplete high
er >  0.50
|   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAREA_AVG <= 0.01
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAREA_AVG >  0.01
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.12
|   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.23
|   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAPARTMENTS_MEDI <= 0.4
8
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
1
|   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAPARTMENTS_MEDI >  0.4
8
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.23
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.61
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
4
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.61
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
2
|   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Secondary / secondary speci
al >  0.50
|   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.03
```

```
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.71
|   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.01
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <=
0.14
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >
0.14
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.01
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Services <=
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
0
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Services >
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.71
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.72
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.72
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 1.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  1.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.03
|   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.10
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.09
|   |   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Laborers <= 0.5
0
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
0
|   |   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Laborers >  0.5
0
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
7
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.09
|   |   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAREA_MEDI <= 0.13
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
7
|   |   |   |   |   |   |   |   |   |   |   |--- NONLIVINGAREA_MEDI >  0.13
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.10
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT <= 0.64
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.12
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 8
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.12
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
6
|   |   |   |   |   |   |   |   |   |   |--- AMT_CREDIT >  0.64
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |--- EXT_SOURCE_1 >  0.52
|   |   |   |   |   |--- LIVINGAREA_MEDI <= 0.99
|   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.92
|   |   |   |   |   |   |   |--- OWN_CAR_AGE <= 0.18
|   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_MEDI <= 0.77
|   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Secondary / sec
ondary special <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_2 <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
0
|   |   |   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_2 >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Secondary / sec
ondary special >  0.50
```

```
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Industry: typ
e 2 <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
6
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Industry: typ
e 2 >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_MEDI >  0.77
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MEDI <= 0.06
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MEDI >  0.06
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- OWN_CAR_AGE >  0.18
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.36
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Business Entity T
ype 3 <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- WEEKDAY_APPR_PROCESS_START_THUR
SDAY <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- WEEKDAY_APPR_PROCESS_START_THUR
SDAY >  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Business Entity T
ype 3 >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.36
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.46
|   |   |   |   |   |   |   |   |   |   |   |--- FLAG_EMAIL <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- FLAG_EMAIL >  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.46
|   |   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Industry: typ
e 1 <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
7
|   |   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Industry: typ
e 1 >  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.92
|   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.92
|   |   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Married <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Married >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.92
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_QRT <= 0.01
|   |   |   |   |   |   |   |   |   |   |--- BASEMENTAREA_MEDI <= 0.77
|   |   |   |   |   |   |   |   |   |   |   |--- OBS_60_CNT_SOCIAL_CIRCLE <= 0.0
6
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
9
|   |   |   |   |   |   |   |   |   |   |   |--- OBS_60_CNT_SOCIAL_CIRCLE >  0.0
6
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- BASEMENTAREA_MEDI >  0.77
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_QRT >  0.01
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- LIVINGAREA_MEDI >  0.99
|   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <= 0.26
|   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >  0.26
|   |   |   |   |   |   |   |   |--- class: 1
```

```
|   |   |   |--- EXT_SOURCE_2 >  0.72
|   |   |   |   |--- EXT_SOURCE_1 <= 0.24
|   |   |   |   |   |--- EXT_SOURCE_1 <= 0.01
|   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |--- EXT_SOURCE_1 >  0.01
|   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START <= 0.41
|   |   |   |   |   |   |   |--- ENTRANCES_AVG <= 0.06
|   |   |   |   |   |   |   |   |--- LANDAREA_MODE <= 0.04
|   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Civil marriage <
= 0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- NAME_FAMILY_STATUS_Civil marriage >
0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- LANDAREA_MODE >  0.04
|   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- ENTRANCES_AVG >  0.06
|   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.04
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_WEEK <= 0.06
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_WEEK >  0.06
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.04
|   |   |   |   |   |   |   |   |   |--- YEARS_BUILD_MEDI <= 0.98
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.97
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
6
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.97
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |--- YEARS_BUILD_MEDI >  0.98
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- HOUR_APPR_PROCESS_START >  0.41
|   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 1.00
|   |   |   |   |   |   |   |   |   |--- FLAG_OWN_CAR <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- WEEKDAY_APPR_PROCESS_START_FRIDAY <
= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MEDI <=
0.96
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MEDI >
0.96
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
1
|   |   |   |   |   |   |   |   |   |   |--- WEEKDAY_APPR_PROCESS_START_FRIDAY >
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- NAME_TYPE_SUITE_Children <= 0.5
0
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 5
|   |   |   |   |   |   |   |   |   |   |   |--- NAME_TYPE_SUITE_Children >  0.5
0
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |--- FLAG_OWN_CAR >  0.50
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE <= 0.00
|   |   |   |   |   |   |   |   |   |   |   |--- LANDAREA_MEDI <= 0.04
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- LANDAREA_MEDI >  0.04
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE >  0.00
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 0.22
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  0.22
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
6
|   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  1.00
```

```
|   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.08
|   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.08
|   |   |   |   |   |   |   |   |   |--- REG_REGION_NOT_LIVE_REGION <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- REG_REGION_NOT_LIVE_REGION >  0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |--- EXT_SOURCE_1 >  0.24
|   |   |   |   |   |--- NAME_EDUCATION_TYPE_Higher education <= 0.50
|   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.91
|   |   |   |   |   |   |   |--- NAME_INCOME_TYPE_Unemployed <= 0.50
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.82
|   |   |   |   |   |   |   |   |   |--- CODE_GENDER_M <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- DEF_30_CNT_SOCIAL_CIRCLE <= 0.0
4
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
1
|   |   |   |   |   |   |   |   |   |   |--- DEF_30_CNT_SOCIAL_CIRCLE >  0.0
4
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
5
|   |   |   |   |   |   |   |   |   |--- CODE_GENDER_M >  0.50
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_WEEK <=
0.25
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
7
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_WEEK >
0.25
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.82
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.49
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_DAY <= 0.
28
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
3
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_DAY >  0.
28
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.49
|   |   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 1.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
8
|   |   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  1.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- NAME_INCOME_TYPE_Unemployed >  0.50
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.91
|   |   |   |   |   |   |   |   |--- REGION_RATING_CLIENT <= 0.75
|   |   |   |   |   |   |   |   |   |--- REGION_RATING_CLIENT_W_CITY <= 0.25
|   |   |   |   |   |   |   |   |   |   |--- DEF_30_CNT_SOCIAL_CIRCLE <= 0.13
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH <= 1.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
3
|   |   |   |   |   |   |   |   |   |   |   |--- DAYS_ID_PUBLISH >  1.00
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- DEF_30_CNT_SOCIAL_CIRCLE >  0.13
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- REGION_RATING_CLIENT_W_CITY >  0.25
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.54
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.10
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
1
|   |   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.10
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
```

```
6
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.54
|   |   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE <= 0.71
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
8
|   |   |   |   |   |   |   |   |   |   |--- OWN_CAR_AGE >  0.71
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |--- REGION_RATING_CLIENT >  0.75
|   |   |   |   |   |   |   |   |   |--- REG_CITY_NOT_LIVE_CITY <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- BASEMENTAREA_MEDI <= 0.45
|   |   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Drivers <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
0
|   |   |   |   |   |   |   |   |   |   |--- OCCUPATION_TYPE_Drivers >  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 8
|   |   |   |   |   |   |   |   |   |--- BASEMENTAREA_MEDI >  0.45
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MEDI <= 0.12
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MEDI >  0.12
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- REG_CITY_NOT_LIVE_CITY >  0.50
|   |   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE <= 0.18
|   |   |   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_AVG <= 0.05
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAPARTMENTS_AVG >  0.05
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 6
|   |   |   |   |   |   |   |   |   |   |--- AMT_GOODS_PRICE >  0.18
|   |   |   |   |   |   |   |   |   |   |   |--- REG_REGION_NOT_WORK_REGION <=
0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |   |--- REG_REGION_NOT_WORK_REGION >
0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Higher education >  0.50
|   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.25
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.25
|   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_2 <= 0.50
|   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL <= 0.02
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.31
|   |   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MODE <=
0.46
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MODE >
0.46
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
6
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.31
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.78
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
1
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.78
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
5
|   |   |   |   |   |   |   |   |   |--- AMT_INCOME_TOTAL >  0.02
|   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.80
|   |   |   |   |   |   |   |   |   |   |   |--- TOTALAREA_MODE <= 0.05
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- TOTALAREA_MODE >  0.05
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.80
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_2 >  0.50
|   |   |   |   |   |   |   |   |   |--- class: 1
```

```
|   |   |--- EXT_SOURCE_3 >  0.61
|   |   |   |--- EXT_SOURCE_2 <= 0.72
|   |   |   |   |--- DAYS_EMPLOYED <= 0.92
|   |   |   |   |   |--- EXT_SOURCE_1 <= 0.63
|   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.63
|   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.63
|   |   |   |   |   |   |   |   |--- NONLIVINGAPARTMENTS_AVG <= 0.98
|   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.83
|   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.63
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
4
|   |   |   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.63
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.83
|   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.83
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.83
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
6
|   |   |   |   |   |   |   |   |--- NONLIVINGAPARTMENTS_AVG >  0.98
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_AVG <= 0.23
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_AVG >  0.23
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.63
|   |   |   |   |   |   |   |   |--- FLOORSMIN_MEDI <= 0.96
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Transport: type 1
<= 0.50
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_MON <= 0.
52
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
1
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_MON >  0.
52
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Transport: type 1
>  0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- FLOORSMIN_MEDI >  0.96
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.63
|   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |--- EXT_SOURCE_1 >  0.63
|   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.46
|   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.46
|   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_MON <= 0.44
|   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_6 <= 0.50
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Postal <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Realtor <= 0.
50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
2
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Realtor >  0.
50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Postal >  0.50
|   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE <= 0.01
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE >  0.01
|   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |--- FLAG_DOCUMENT_6 >  0.50
|   |   |   |   |   |   |   |   |   |--- REG_REGION_NOT_WORK_REGION <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.96
```

```
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
4
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.96
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- REG_REGION_NOT_WORK_REGION >  0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_MON >  0.44
|   |   |   |   |   |   |   |   |--- FLAG_PHONE <= 0.50
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- FLAG_PHONE >  0.50
|   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |--- DAYS_EMPLOYED >  0.92
|   |   |   |   |   |--- EXT_SOURCE_1 <= 0.10
|   |   |   |   |   |   |--- LANDAREA_MODE <= 0.10
|   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.82
|   |   |   |   |   |   |   |   |--- TOTALAREA_MODE <= 0.02
|   |   |   |   |   |   |   |   |   |--- ENTRANCES_MODE <= 0.12
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- ENTRANCES_MODE >  0.12
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- TOTALAREA_MODE >  0.02
|   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.24
|   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR <= 0.05
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- SK_ID_CURR >  0.05
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
|   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.24
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.82
|   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.84
|   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.84
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- LANDAREA_MODE >  0.10
|   |   |   |   |   |   |   |--- WALLSMATERIAL_MODE_Panel <= 0.50
|   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- WALLSMATERIAL_MODE_Panel >  0.50
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |--- EXT_SOURCE_1 >  0.10
|   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.65
|   |   |   |   |   |   |   |--- CNT_CHILDREN <= 0.39
|   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Higher education <=
0.50
|   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 1.00
|   |   |   |   |   |   |   |   |   |   |--- TOTALAREA_MODE <= 0.97
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
7
|   |   |   |   |   |   |   |   |   |   |--- TOTALAREA_MODE >  0.97
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  1.00
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- NAME_EDUCATION_TYPE_Higher education >
0.50
|   |   |   |   |   |   |   |   |   |--- DEF_60_CNT_SOCIAL_CIRCLE <= 0.10
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.65
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
9
|   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.65
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- DEF_60_CNT_SOCIAL_CIRCLE >  0.10
|   |   |   |   |   |   |   |   |   |   |--- WALLSMATERIAL_MODE_Stone, brick
<= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- WALLSMATERIAL_MODE_Stone, brick
```

```
>  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- CNT_CHILDREN >  0.39
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.65
|   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Housing <= 0.50
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Transport: type 3 <=
0.50
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY <= 0.38
|   |   |   |   |   |   |   |   |   |   |   |--- NAME_HOUSING_TYPE_Co-op apartme
nt <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
1
|   |   |   |   |   |   |   |   |   |   |   |--- NAME_HOUSING_TYPE_Co-op apartme
nt >  0.50
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |   |--- AMT_ANNUITY >  0.38
|   |   |   |   |   |   |   |   |   |   |   |--- FLOORSMIN_AVG <= 0.29
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |   |--- FLOORSMIN_AVG >  0.29
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Transport: type 3 >
0.50
|   |   |   |   |   |   |   |   |   |   |--- CODE_GENDER_F <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- CODE_GENDER_F >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Housing >  0.50
|   |   |   |   |   |   |   |   |   |--- CODE_GENDER_M <= 0.50
|   |   |   |   |   |   |   |   |   |   |--- LANDAREA_MODE <= 0.09
|   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |   |--- LANDAREA_MODE >  0.09
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- CODE_GENDER_M >  0.50
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |--- EXT_SOURCE_2 >  0.72
|   |   |   |   |   |--- EXT_SOURCE_1 <= 0.30
|   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.15
|   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.15
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.30
|   |   |   |   |   |   |   |   |--- ENTRANCES_MODE <= 0.84
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MEDI <= 0.08
|   |   |   |   |   |   |   |   |   |   |--- FLOORSMAX_MODE <= 0.42
|   |   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE <= 0.09
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
2
|   |   |   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE >  0.09
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- FLOORSMAX_MODE >  0.42
|   |   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MODE <=
0.98
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MODE >
0.98
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MEDI >  0.08
|   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 1.00
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.03
|   |   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.03
|   |   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 9
|   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  1.00
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
```

```
|   |   |   |   |   |   |   |--- ENTRANCES_MODE >  0.84
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.30
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |--- EXT_SOURCE_1 >  0.30
|   |   |   |   |   |--- DEF_30_CNT_SOCIAL_CIRCLE <= 0.10
|   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.59
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.59
|   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.92
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 <= 0.70
|   |   |   |   |   |   |   |   |   |   |--- OBS_60_CNT_SOCIAL_CIRCLE <= 0.0
5
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
8
|   |   |   |   |   |   |   |   |   |   |--- OBS_60_CNT_SOCIAL_CIRCLE >  0.0
5
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |--- EXT_SOURCE_3 >  0.70
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <=
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
9
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >
0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.92
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Restaurant <= 0.5
0
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.06
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.06
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 4
0
|   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Restaurant >  0.5
0
|   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MEDI <=
0.99
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 3
|   |   |   |   |   |   |   |   |   |   |--- YEARS_BEGINEXPLUATATION_MEDI >
0.99
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.59
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.59
|   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE <= 0.01
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 <= 0.74
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- EXT_SOURCE_1 >  0.74
|   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- REGION_POPULATION_RELATIVE >  0.01
|   |   |   |   |   |   |   |   |--- DAYS_BIRTH <= 0.54
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.63
|   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION <= 0.63
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 8
|   |   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.63
|   |   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |   |--- DAYS_REGISTRATION >  0.63
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Industry: typ
e 2 <= 0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 1
7
|   |   |   |   |   |   |   |   |   |   |--- ORGANIZATION_TYPE_Industry: typ
e 2 >  0.50
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
```

```
|   |   |   |   |   |   |   |   |--- DAYS_BIRTH >  0.54
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE <= 0.99
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_DAY <= 0.
28
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
2
|   |   |   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_DAY >  0.
28
|   |   |   |   |   |   |   |   |   |   |   |--- truncated branch of depth 2
|   |   |   |   |   |   |   |   |   |--- LIVINGAREA_MODE >  0.99
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |--- DEF_30_CNT_SOCIAL_CIRCLE >  0.10
|   |   |   |   |   |   |--- DAYS_BIRTH <= 0.49
|   |   |   |   |   |   |   |--- EXT_SOURCE_2 <= 0.79
|   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR <= 0.16
|   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |--- AMT_REQ_CREDIT_BUREAU_YEAR >  0.16
|   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |--- EXT_SOURCE_2 >  0.79
|   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |--- DAYS_BIRTH >  0.49
|   |   |   |   |   |   |   |--- REGION_RATING_CLIENT <= 0.75
|   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED <= 0.50
|   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE <= 0.96
|   |   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |   |   |--- DAYS_LAST_PHONE_CHANGE >  0.96
|   |   |   |   |   |   |   |   |   |   |--- class: 1
|   |   |   |   |   |   |   |   |--- DAYS_EMPLOYED >  0.50
|   |   |   |   |   |   |   |   |   |--- class: 0
|   |   |   |   |   |   |   |--- REGION_RATING_CLIENT >  0.75
|   |   |   |   |   |   |   |   |--- class: 1
```

In [73]:
```
y_pred_dt = classifier.predict(x_test)
```

In [74]:
```
cnfmx_dt = metrics.confusion_matrix(y_test,y_pred_dt)
cnfmx_dt
```

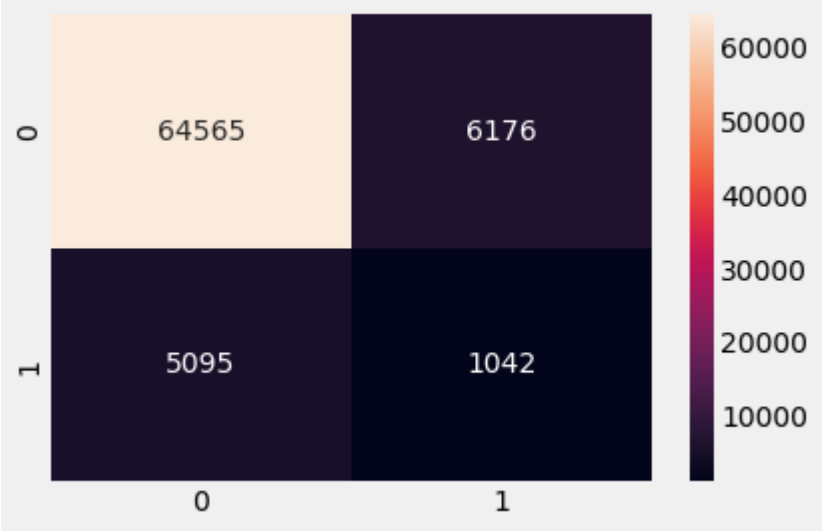
Out[74]:
```
array([[64565,  6176],
       [ 5095,  1042]])
```

In [75]:
```
acc_dt = metrics.accuracy_score(y_test,y_pred_dt)
acc_dt
```

Out[75]:
```
0.8533910871770858
```

In [76]:
```
sns.heatmap(cnfmx_dt,annot = True, fmt = 'g' )
```

Out[76]:
```
<AxesSubplot: >
```



In [78]:
```
from sklearn.metrics import classification_report
target_names = ['can_repay', 'cannot_repay']
print(classification_report(y_test, y_pred_dt, target_names=target_names))
```

```
              precision    recall  f1-score   support

   can_repay       0.93      0.91      0.92     70741
cannot_repay       0.14      0.17      0.16      6137

    accuracy                           0.85     76878
   macro avg       0.54      0.54      0.54     76878
weighted avg       0.86      0.85      0.86     76878
```

Random Forest

In [57]:
```
pip install graphviz
```

```
Collecting graphviz
  Downloading graphviz-0.20.1-py3-none-any.whl (47 kB)
     |████████████████████████████████| 47 kB 1.7 MB/s eta 0:00:01
Installing collected packages: graphviz
Successfully installed graphviz-0.20.1
Note: you may need to restart the kernel to use updated packages.
```

In [61]:
```
import graphviz
```

In [43]:
```
x = app_train.copy()
y = x.TARGET
x = x.drop(['TARGET'],axis=1)
feature_names = x.columns
labels = y.unique()
from sklearn.impute import SimpleImputer
from sklearn.preprocessing import MinMaxScaler
imputer = SimpleImputer(missing_values=np.nan, strategy='median')
scaler = MinMaxScaler(feature_range = (0, 1))
imputer.fit(x)
x = imputer.transform(x)
scaler.fit(x)
x = scaler.transform(x)
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test = train_test_split(x,y,test_size=0.25,random_s
```

In [44]:
```
from sklearn.ensemble import RandomForestClassifier
rf = RandomForestClassifier()
rf.fit(x_train,y_train)
```

Out[44]:
```
RandomForestClassifier()
```

In [46]:
```
y_pred_rf = rf.predict(x_test)
```

In [49]:
```
acc_rf = metrics.accuracy_score(y_test,y_pred_rf)
acc_rf
```

Out[49]:
```
0.9201462056765265
```

In [79]:
```
from sklearn.metrics import classification_report
target_names = ['can_repay', 'cannot_repay']
print(classification_report(y_test, y_pred_rf, target_names=target_names))
```

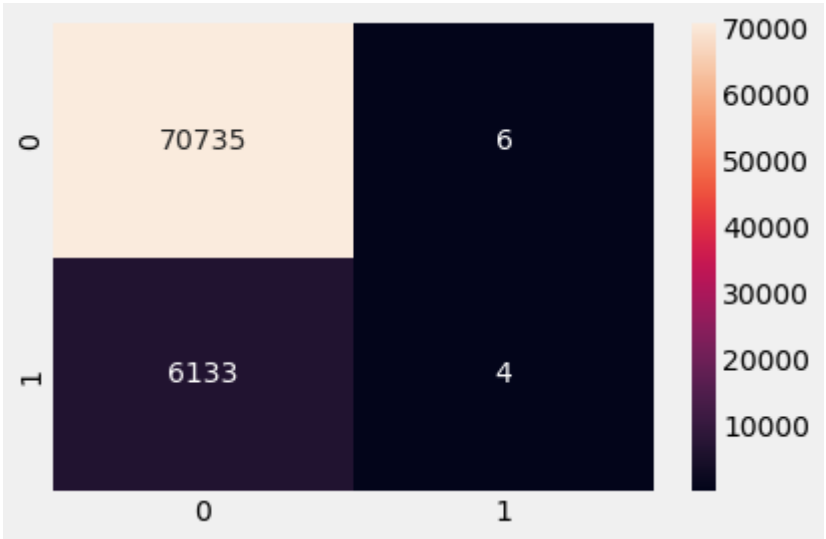
```
              precision    recall  f1-score   support

   can_repay       0.92      1.00      0.96     70741
cannot_repay       0.40      0.00      0.00      6137

    accuracy                           0.92     76878
   macro avg       0.66      0.50      0.48     76878
weighted avg       0.88      0.92      0.88     76878
```

In [80]:
```
cnfmx_rf = metrics.confusion_matrix(y_test,y_pred_rf)
cnfmx_rf
```

Out[80]:
```
array([[70735,     6],
       [ 6133,     4]])
```

In [81]:
```
sns.heatmap(cnfmx_rf,annot = True, fmt = 'g' )
```

Out[81]:
```
<AxesSubplot: >
```



k-nearest neighbours

In [ ]:
```
#knn,naive bayes,comments
```

In [82]:
```
x = app_train.copy()
y = x.TARGET
```

```
x = x.drop(['TARGET'],axis=1)
feature_names = x.columns
labels = y.unique()
from sklearn.impute import SimpleImputer
from sklearn.preprocessing import MinMaxScaler
imputer = SimpleImputer(missing_values=np.nan, strategy='median')
scaler = MinMaxScaler(feature_range = (0, 1))
imputer.fit(x)
x = imputer.transform(x)
scaler.fit(x)
x = scaler.transform(x)
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test = train_test_split(x,y,test_size=0.25,random_s
```

In [83]:
```
from sklearn.neighbors import KNeighborsClassifier
knn5 = KNeighborsClassifier(n_neighbors = 5)
knn1 = KNeighborsClassifier(n_neighbors=1)
```

In [86]:
```
knn5.fit(x_train, y_train)
knn1.fit(x_train, y_train)
y_pred_5 = knn5.predict(x_test)
y_pred_1 = knn1.predict(x_test)
```

In [87]:
```
from sklearn.metrics import accuracy_score
print("Accuracy with k=5", accuracy_score(y_test, y_pred_5))
print("Accuracy with k=1", accuracy_score(y_test, y_pred_1))
```

```
Accuracy with k=5 0.9156715835479591
Accuracy with k=1 0.858594136163792
```

In [88]:
```
knn7 = KNeighborsClassifier(n_neighbors = 7)
knn7.fit(x_train, y_train)
y_pred_7 = knn5.predict(x_test)
```

In [89]:
```
print("Accuracy with k=7", accuracy_score(y_test, y_pred_7))
```

```
Accuracy with k=7 0.9156715835479591
```

In [90]:
```
from sklearn.metrics import classification_report
target_names = ['can_repay', 'cannot_repay']
print(classification_report(y_test, y_pred_5, target_names=target_names))
```

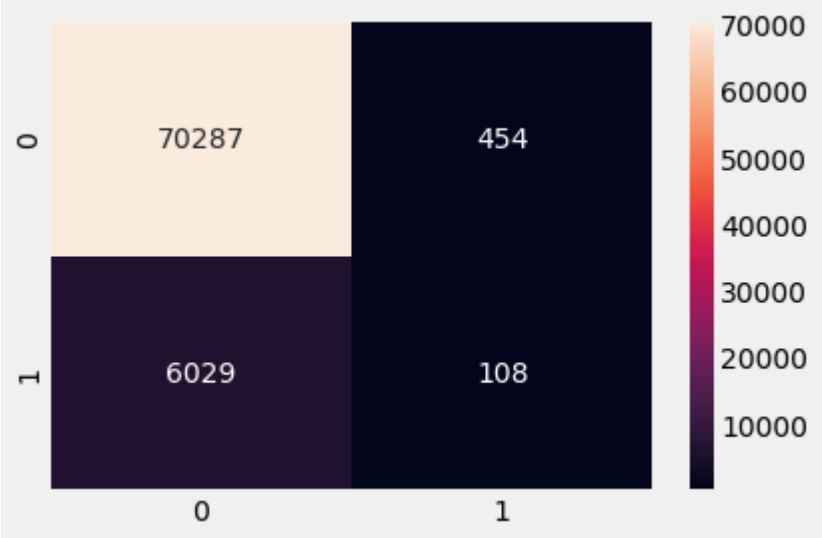
```
              precision    recall  f1-score   support

   can_repay       0.92      0.99      0.96     70741
cannot_repay       0.19      0.02      0.03      6137

    accuracy                           0.92     76878
   macro avg       0.56      0.51      0.49     76878
weighted avg       0.86      0.92      0.88     76878
```

In [98]:
```
cnfmx_knn = metrics.confusion_matrix(y_test,y_pred_5)
cnfmx_knn
```

Out[98]:
```
array([[70287,   454],
       [ 6029,   108]])
```

In [99]:
```
sns.heatmap(cnfmx_knn,annot = True, fmt = 'g' )
```

Out[99]:
```
<AxesSubplot: >
```



Naive bayes

In [93]:
```
x = app_train.copy()
y = x.TARGET
x = x.drop(['TARGET'],axis=1)
feature_names = x.columns
labels = y.unique()
from sklearn.impute import SimpleImputer
from sklearn.preprocessing import MinMaxScaler
imputer = SimpleImputer(missing_values=np.nan, strategy='median')
scaler = MinMaxScaler(feature_range = (0, 1))
imputer.fit(x)
x = imputer.transform(x)
scaler.fit(x)
x = scaler.transform(x)
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test = train_test_split(x,y,test_size=0.25,random_s
```

In [94]:
```
from sklearn.naive_bayes import GaussianNB
nb = GaussianNB()
nb.fit(x_train, y_train)
y_pred_nb = nb.predict(x_test)
```

In [95]:
```
from sklearn.metrics import accuracy_score
print(accuracy_score(y_test, y_pred_nb))
```

```
0.18290017950519005
```

In [97]:
```
from sklearn.metrics import classification_report
target_names = ['can_repay', 'cannot_repay']
print(classification_report(y_test, y_pred_nb, target_names=target_names))
```

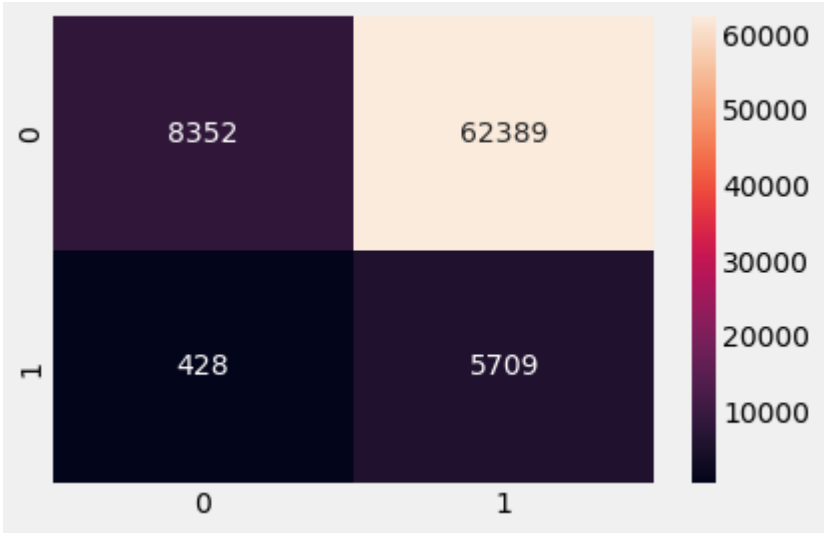
```
              precision    recall  f1-score   support

   can_repay       0.95      0.12      0.21     70741
cannot_repay       0.08      0.93      0.15      6137

    accuracy                           0.18     76878
   macro avg       0.52      0.52      0.18     76878
weighted avg       0.88      0.18      0.21     76878
```

In [100…
```
cnfmx_nb = metrics.confusion_matrix(y_test,y_pred_nb)
cnfmx_nb
```

Out[100]:
```
array([[ 8352, 62389],
       [  428,  5709]])
```

In [101…
```
sns.heatmap(cnfmx_nb,annot = True, fmt = 'g' )
```

Out[101]:
```
<AxesSubplot: >
```



In [ ]:

In [ ]: