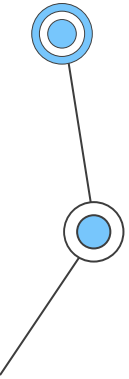
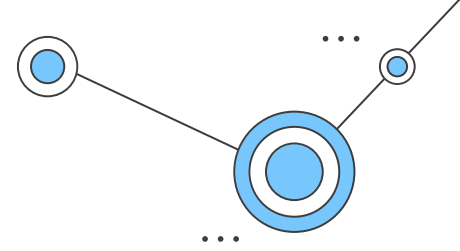


Loan agreement

Hamza A - Adrien G

Sommaire

- Introduction
- Contexte
- L'analyse descriptive
- Le modèle prédictif





Business

01

Le crédit

02

Le marché

03

Qui est intéressé ?

04

Revenus et avenir



LE SCORE ?



How's your credit score?

What scores mean:

800-850

EXCEPTIONAL

You're considered consistently responsible

740-799

VERY GOOD

You're considered generally financially responsible

670-739

GOOD

You're considered a near- or above-average borrower

580-669

FAIR

You'll pay higher interest rates

300-579

VERY POOR

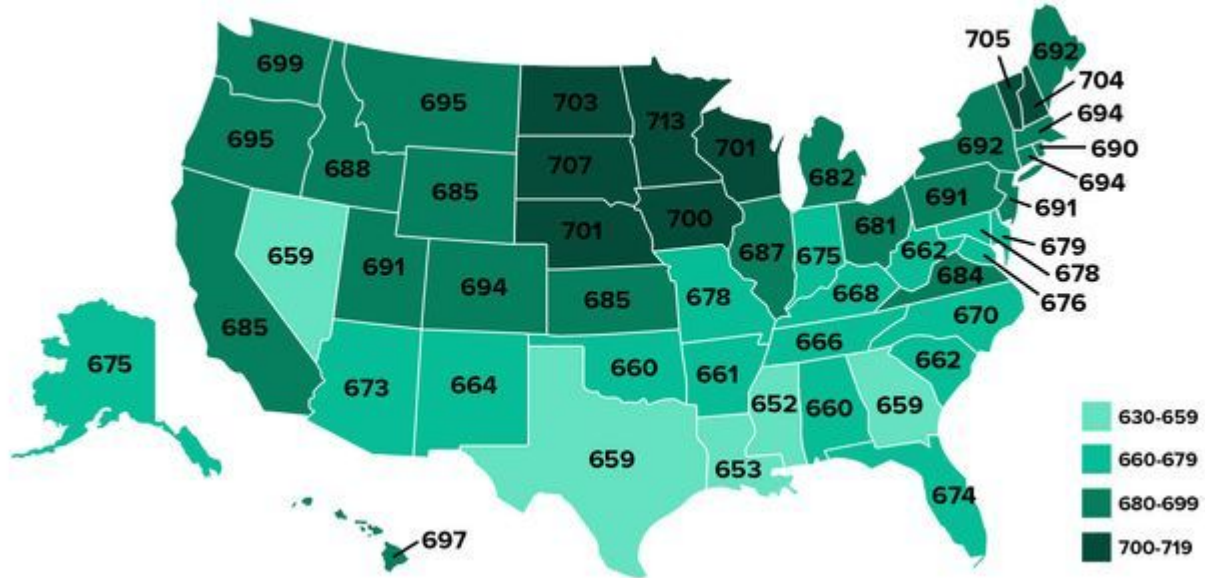
Difficult to obtain financing

SOURCE Motley Fool

 **USA TODAY MONEY**

STATES

Average Credit Score By State (2018)



Source: Experian



Technique

01

Fico score

Aux Etats-Unis

02

5cs of credit

Capital, conditions,
capacité à repayer

03

Les modèles

Tree-based
algorithms, SVM, EM

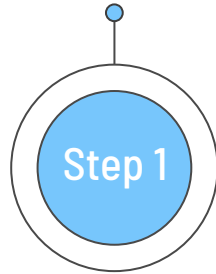
04

Algos de superposition

Pour la finance,
analyse de risque

Analyse descriptive : Processus

Classification binaire :
XGboost



Step 2

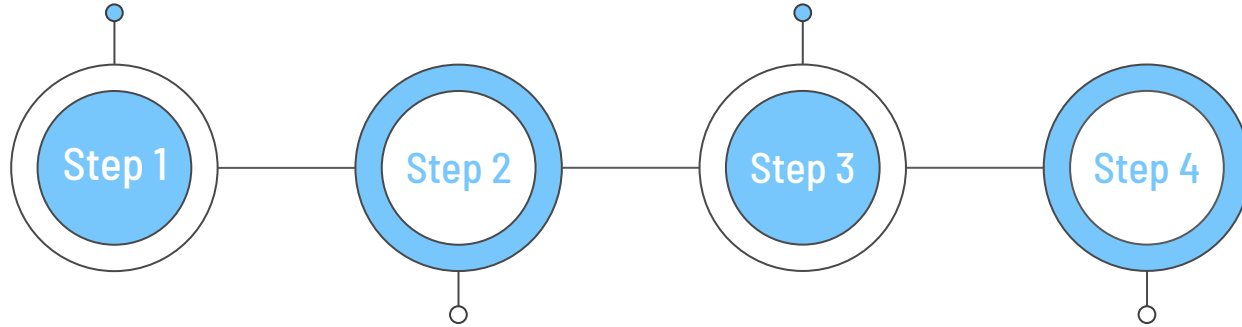
Feature selection :
Boosted Trees

Classification :
Gaussian mixture

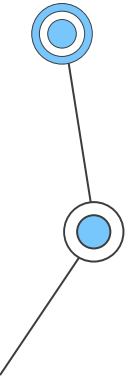
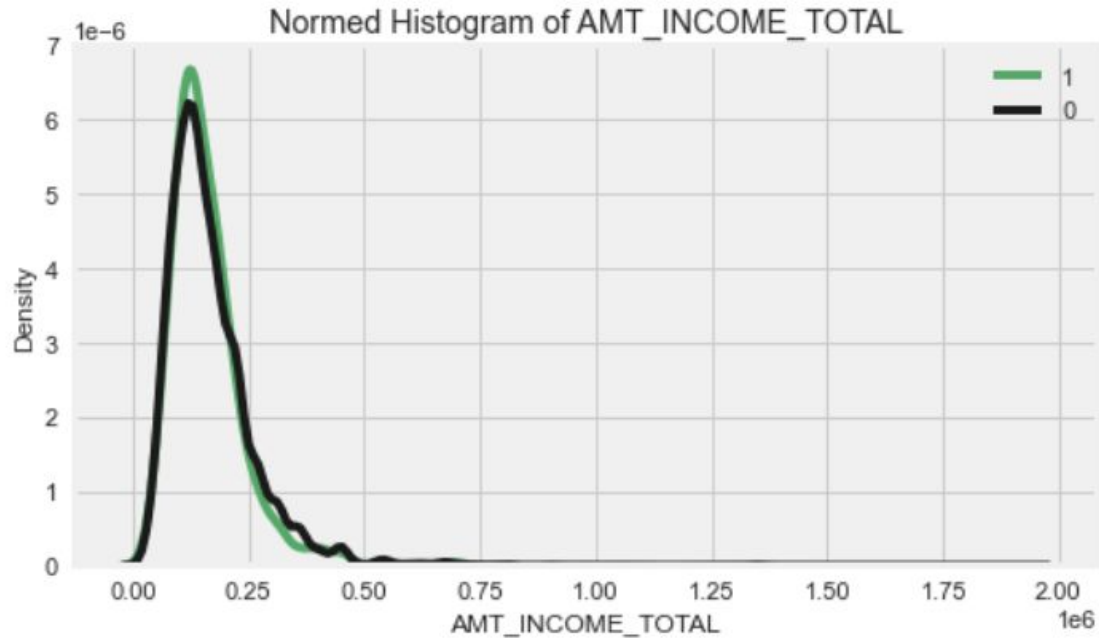
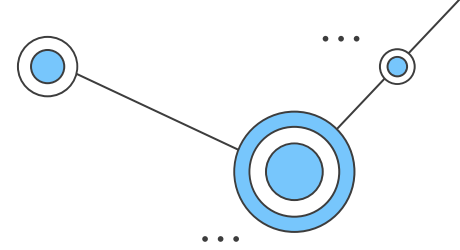
Step 3

Tout plein de graphs

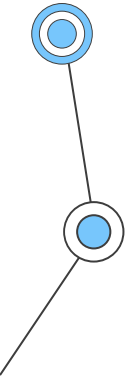
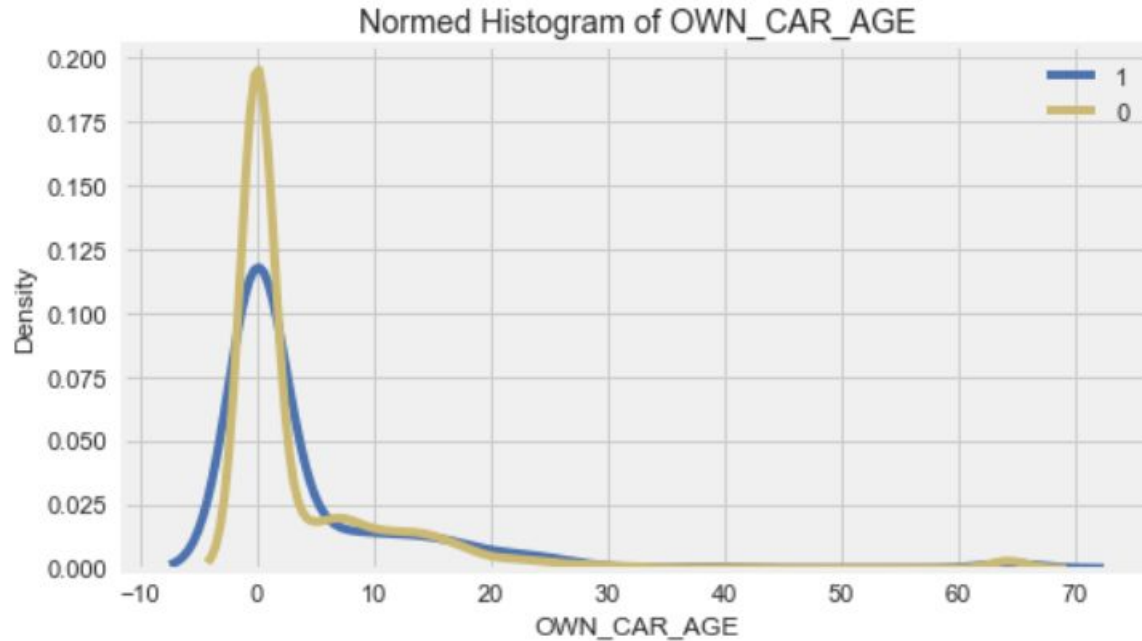
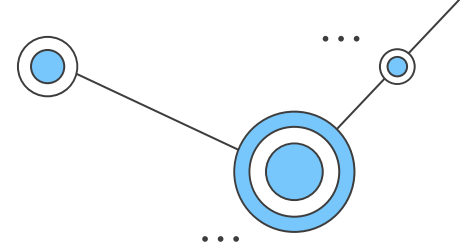
Step 4



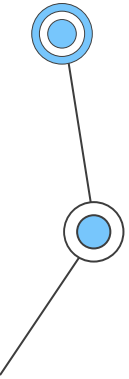
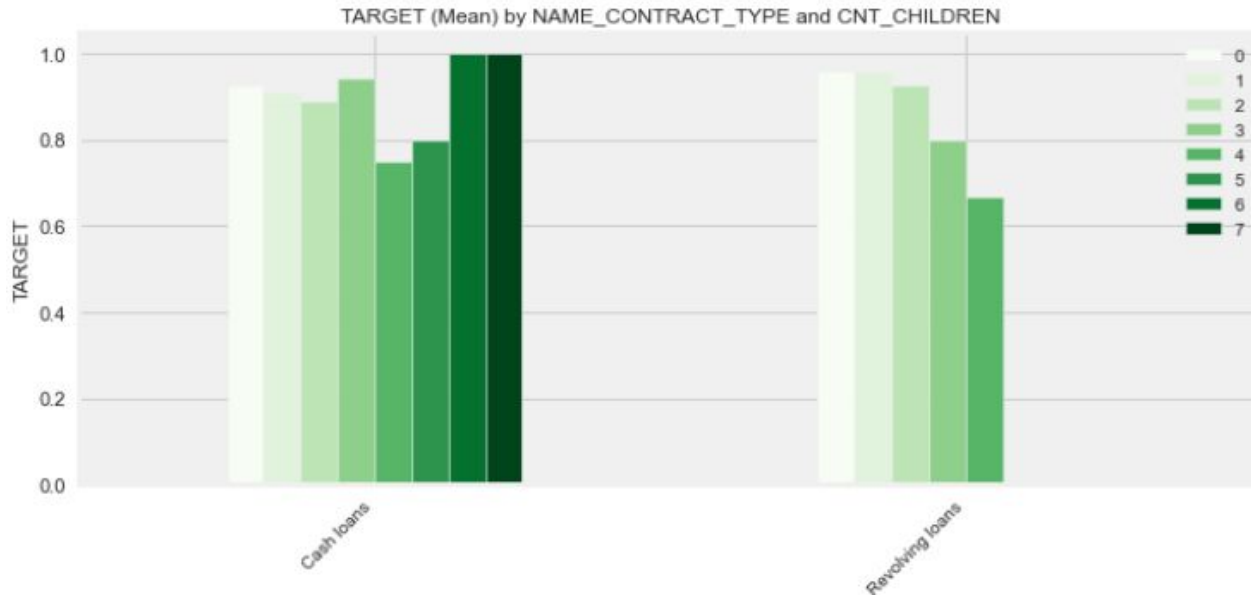
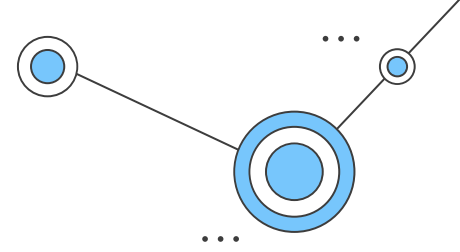
Analyse descriptive : résultats[1]



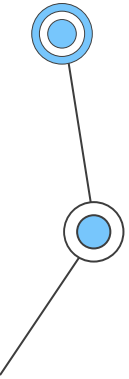
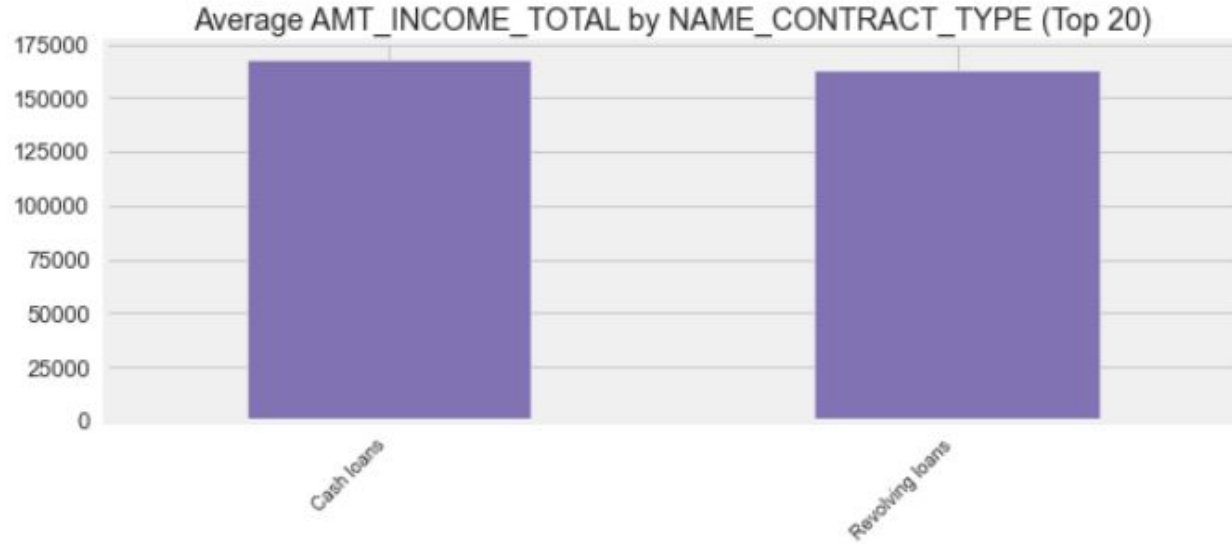
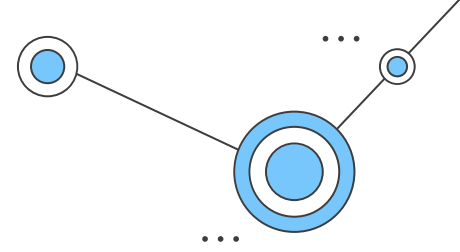
Analyse descriptive : résultats[2]



Analyse descriptive : résultats[3]



Analyse descriptive : résultats[4]



Le modèle

01

Gérer le niveau de NAs

Affecte les perfs du modèle

...

02

Encoding

One hot pour features catég.

...

03

Train / Test set

Via hash > random seed

...

04

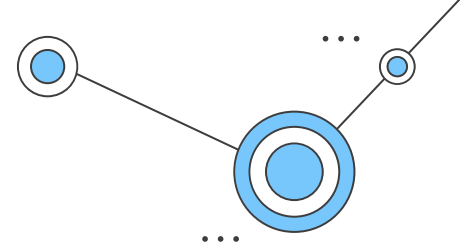
XGBclassifier

Puis test sur un individu

...



Exemple pour un individu



L'input :

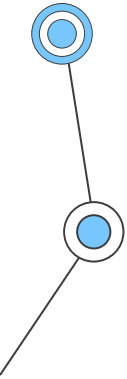
SK_ID_CURR	CNT_CHILDREN	AMT_INCOME_TOTAL	AMT_CREDIT	REGION_POPULATION_RELATIVE
105419.0	1.0	180000.0	545040.0	0.019689

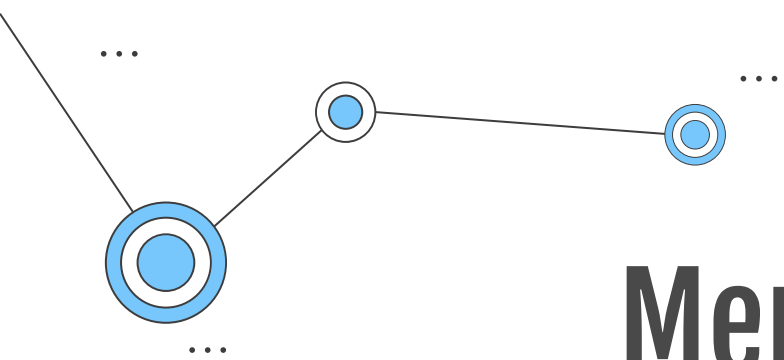
L'output :

9361	
0	0.0



Donc cet individu ne remboursera sûrement pas son prêt !





Mercé

