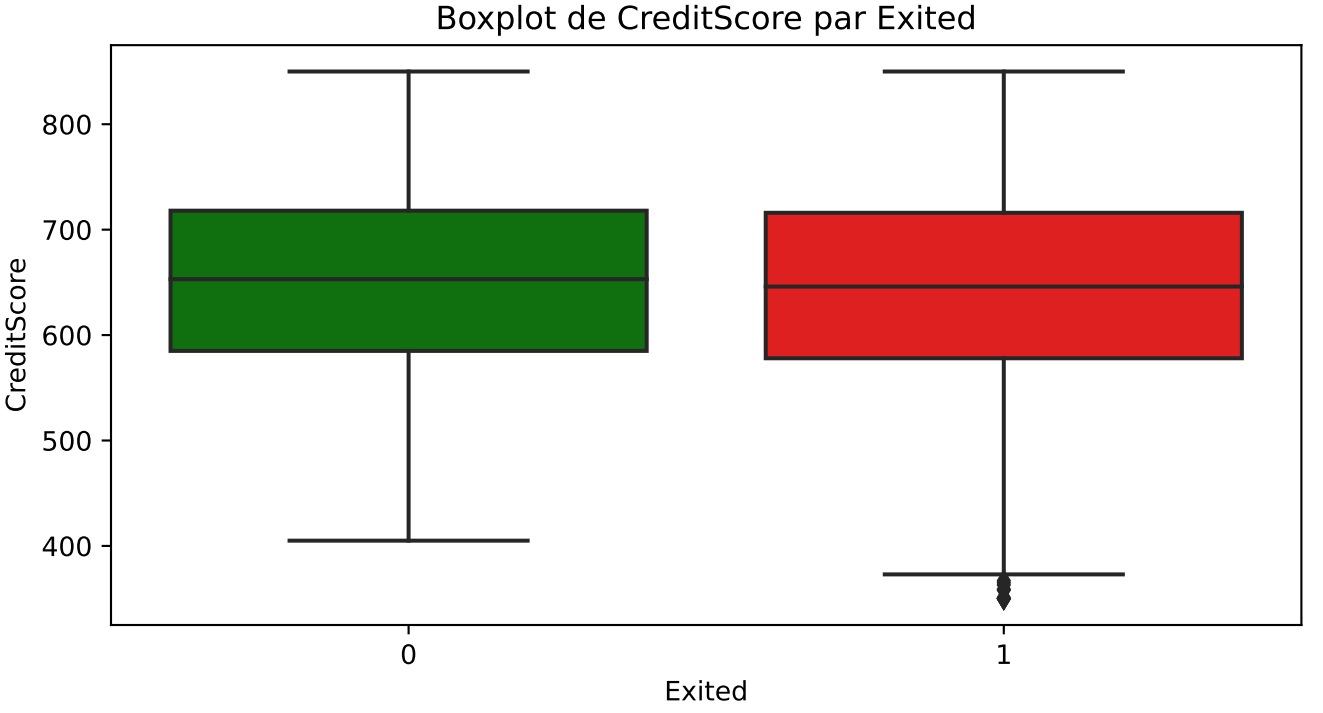
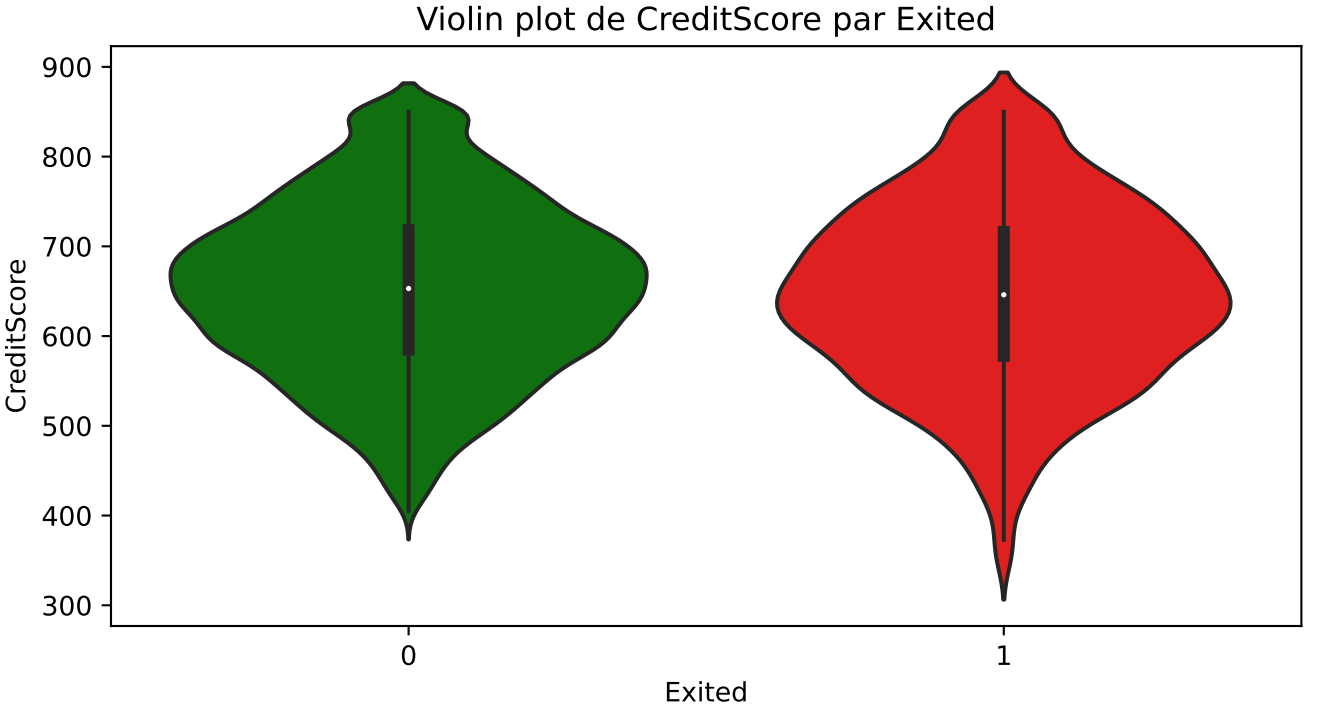
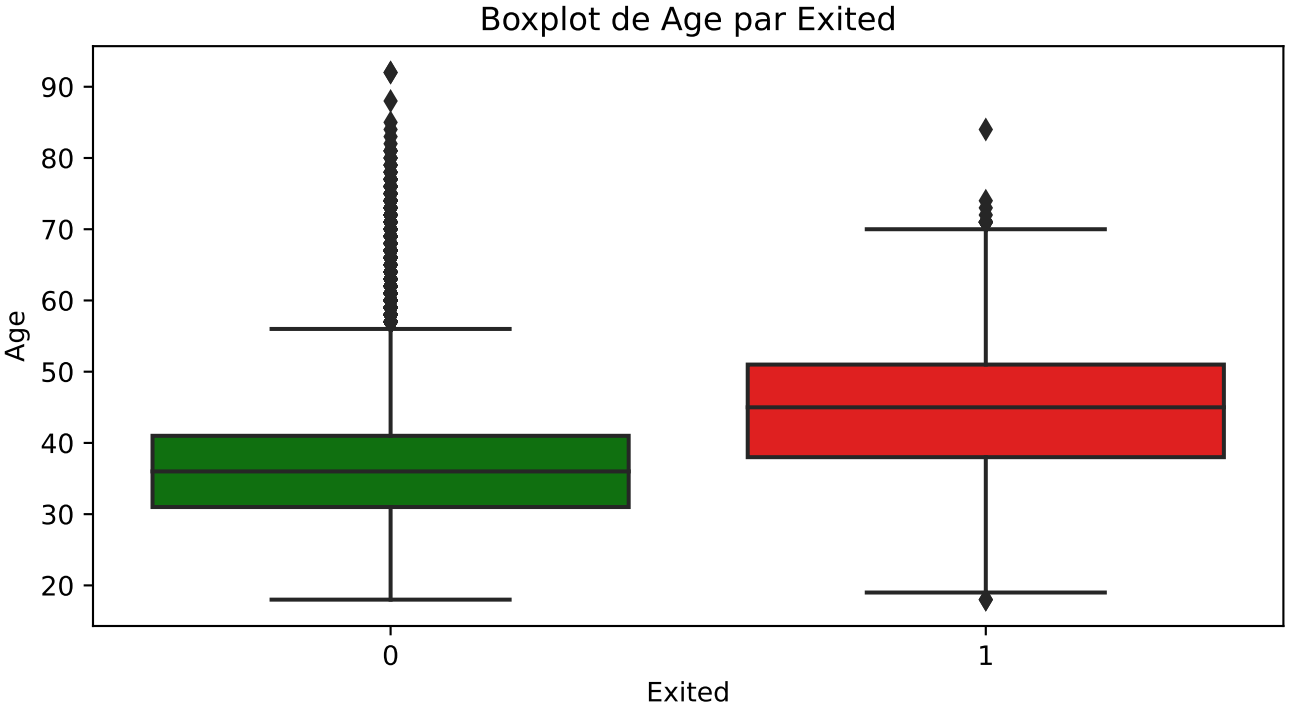
```
Variable : CreditScore

Statistiques globales :
count    10000.000000
mean       650.528800
std         96.653299
min        350.000000
25%        584.000000
50%        652.000000
75%        718.000000
max        850.000000
Name: CreditScore, dtype: float64

Statistiques par Exited :
         count        mean         std    min    25%    50%    75%    max
Exited
0       7962.0  651.837855   95.650047  405.0  585.0  653.0  718.0  850.0
1       2038.0  645.414622  100.337351  350.0  578.0  646.0  716.0  850.0

T-test : t=2.603, p=0.0093
```


Boxplot de CreditScore par Exited
CreditScore
800
700
600
500
400
0
1
Exited

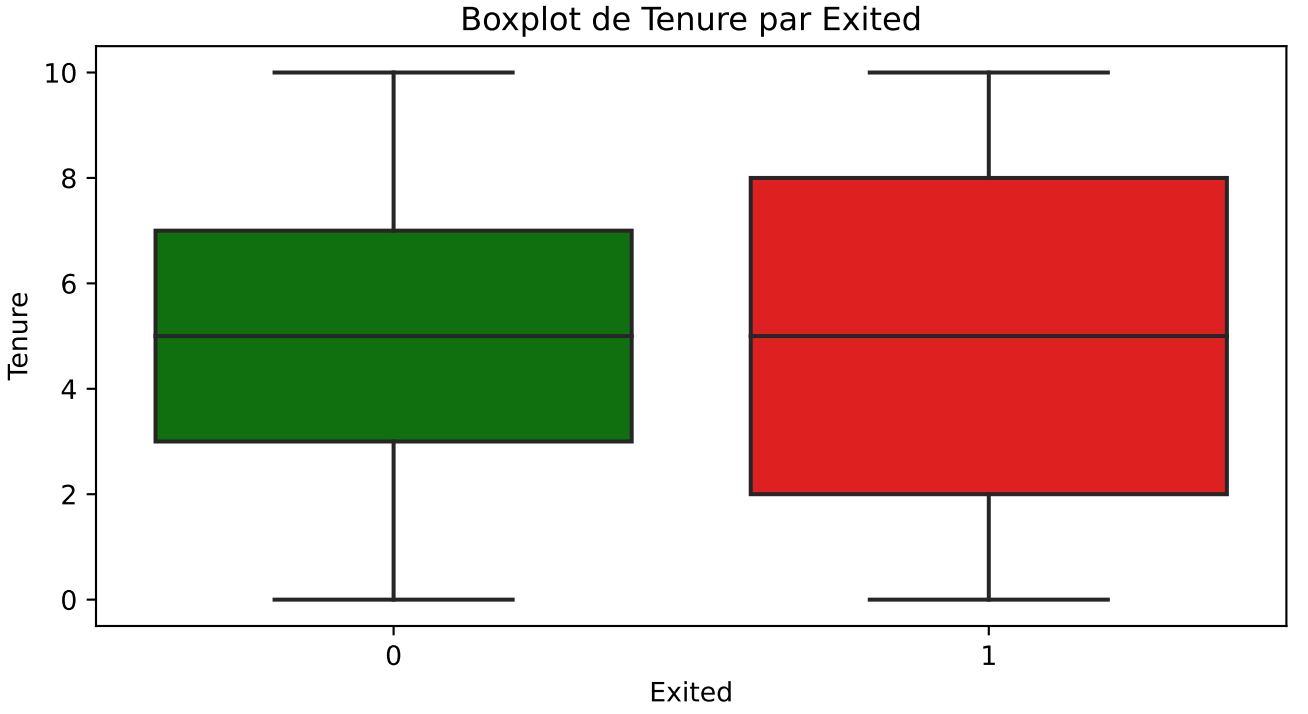

Violin plot de CreditScore par Exited
900
800
700
600
500
400
300
CreditScore
0
1
Exited

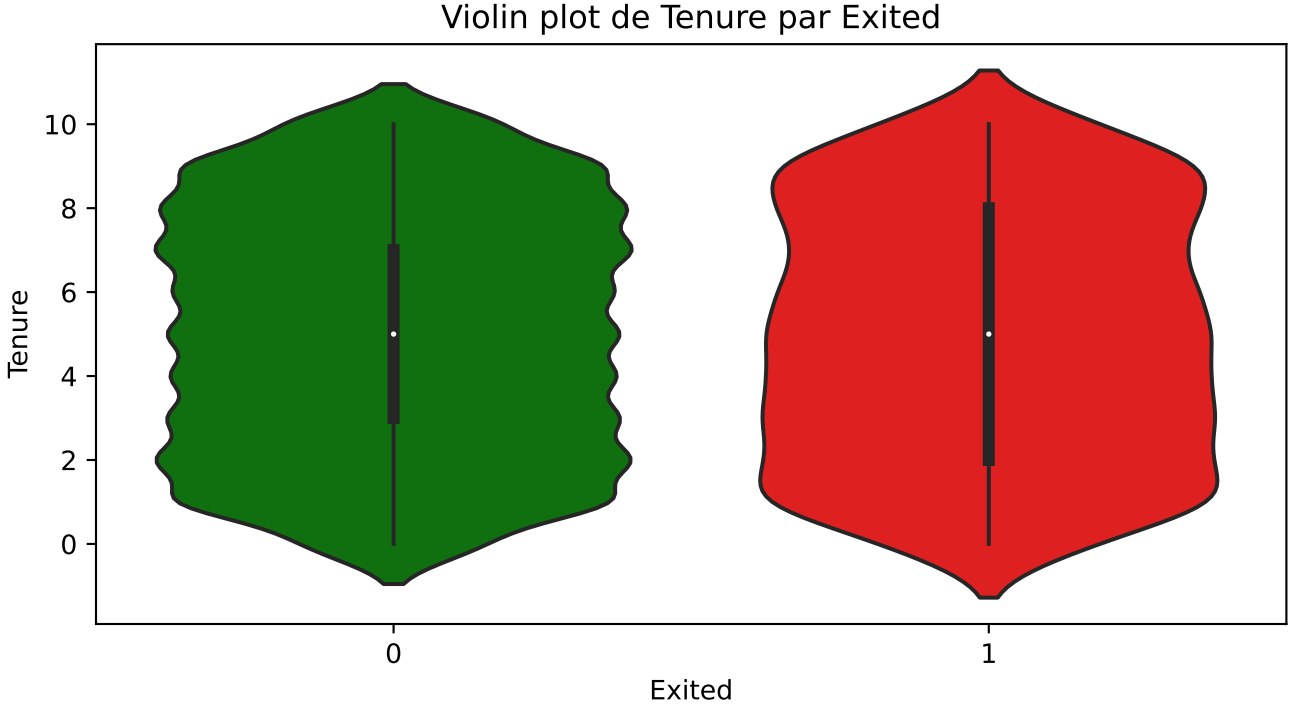
```
Variable : Age

Statistiques globales :
count    10000.000000
mean        38.921800
std         10.487806
min         18.000000
25%         32.000000
50%         37.000000
75%         44.000000
max         92.000000
Name: Age, dtype: float64

Statistiques par Exited :
         count       mean        std   min   25%   50%   75%   max
Exited
0       7962.0  37.408063  10.125957  18.0  31.0  36.0  41.0  92.0
1       2038.0  44.835623   9.759754  18.0  38.0  45.0  51.0  84.0

T-test : t=-30.420, p=0.0000
```


Boxplot de Age par Exited
Age
90
80
70
60
50
40
30
20
0
1
Exited

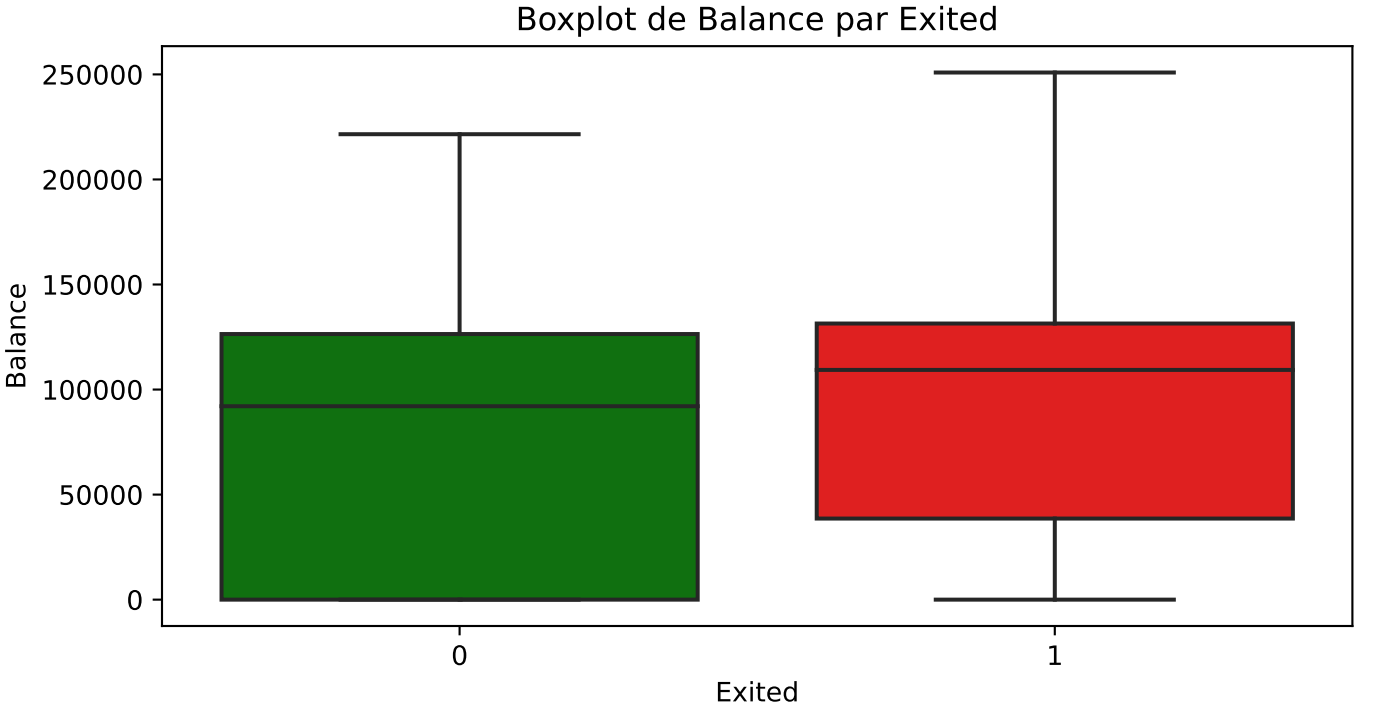
Violin plot de Age par Exited
Age
90
80
70
60
50
40
30
20
10
0
1
Exited

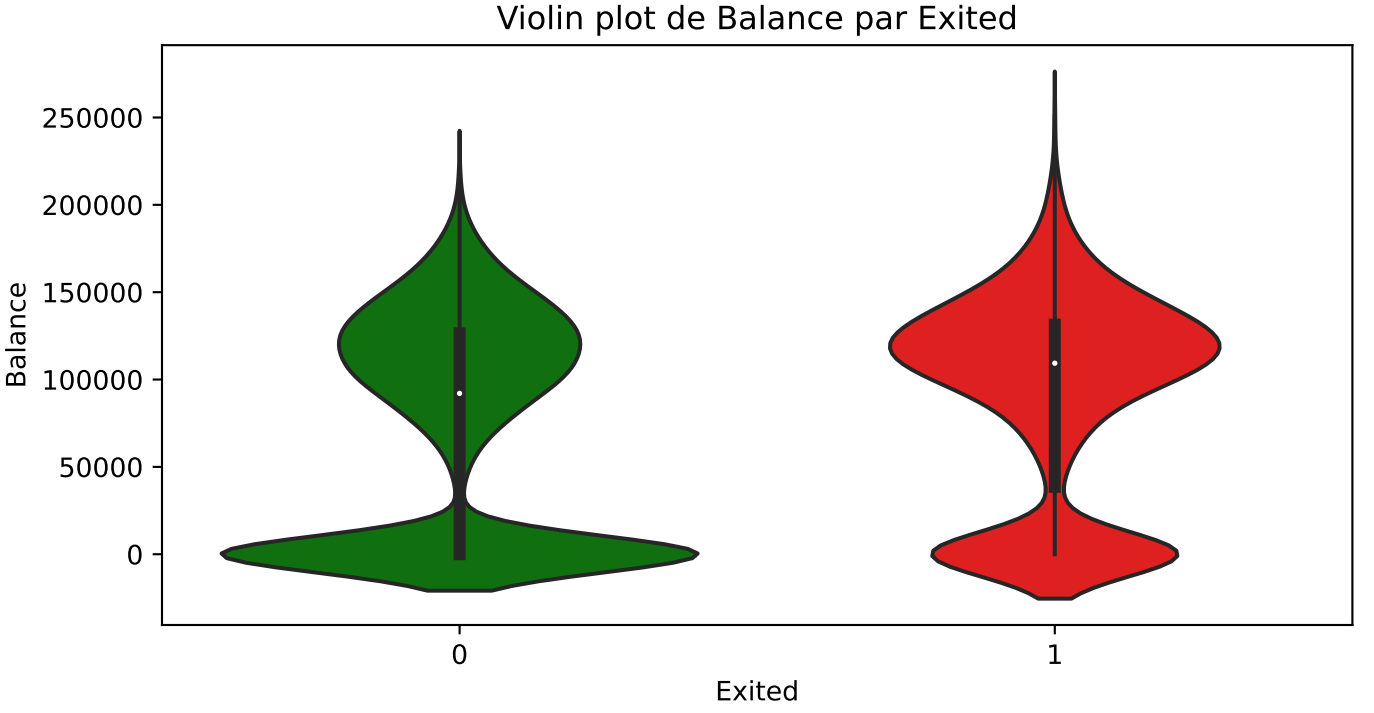
```
Variable : Tenure

Statistiques globales :
count    10000.000000
mean         5.012800
std          2.892174
min          0.000000
25%          3.000000
50%          5.000000
75%          7.000000
max         10.000000
Name: Tenure, dtype: float64

Statistiques par Exited :
         count      mean       std  min  25%  50%  75%   max
Exited
0       7962.0  5.032781  2.880496  0.0  3.0  5.0  7.0  10.0
1       2038.0  4.934740  2.936768  0.0  2.0  5.0  8.0  10.0

T-test : t=1.350, p=0.1771
```


Boxplot de Tenure par Exited
Tenure
10
8
6
4
2
0
0
1
Exited

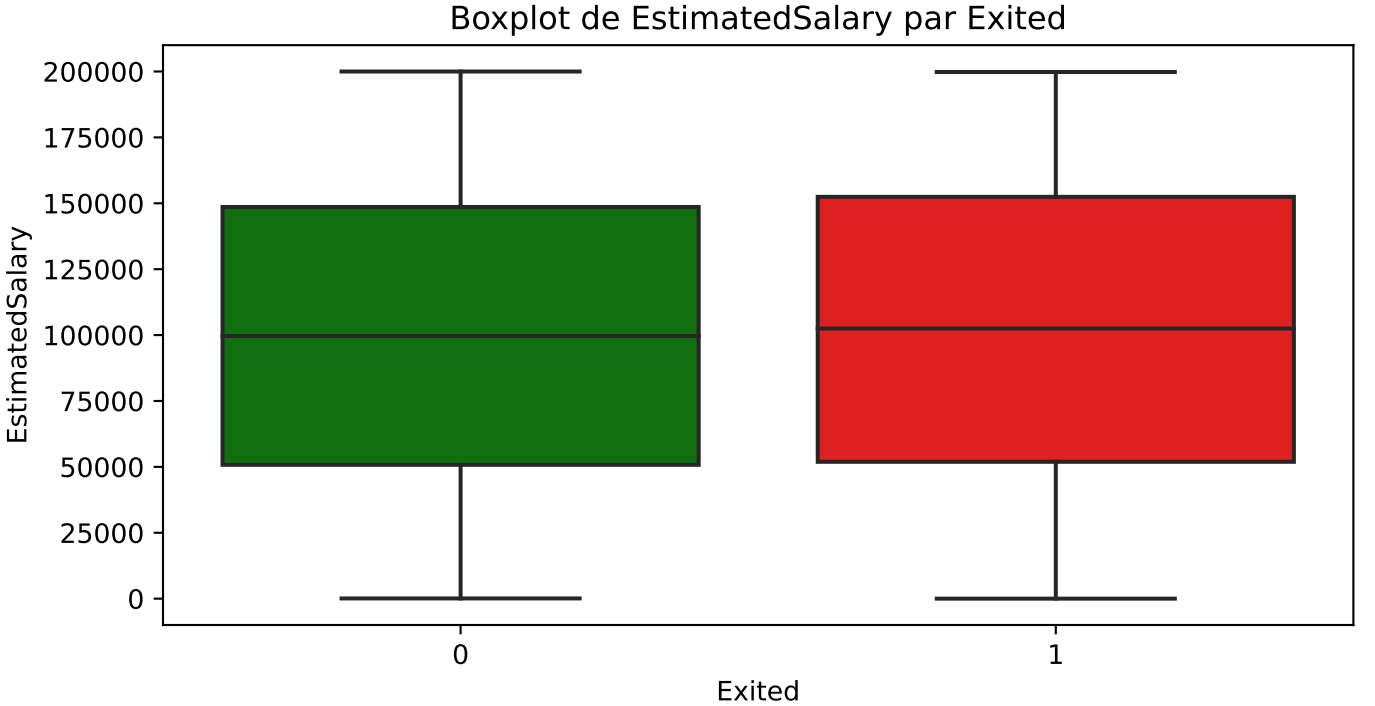

Violin plot de Tenure par Exited
Tenure
10
8
6
4
2
0
0
1
Exited

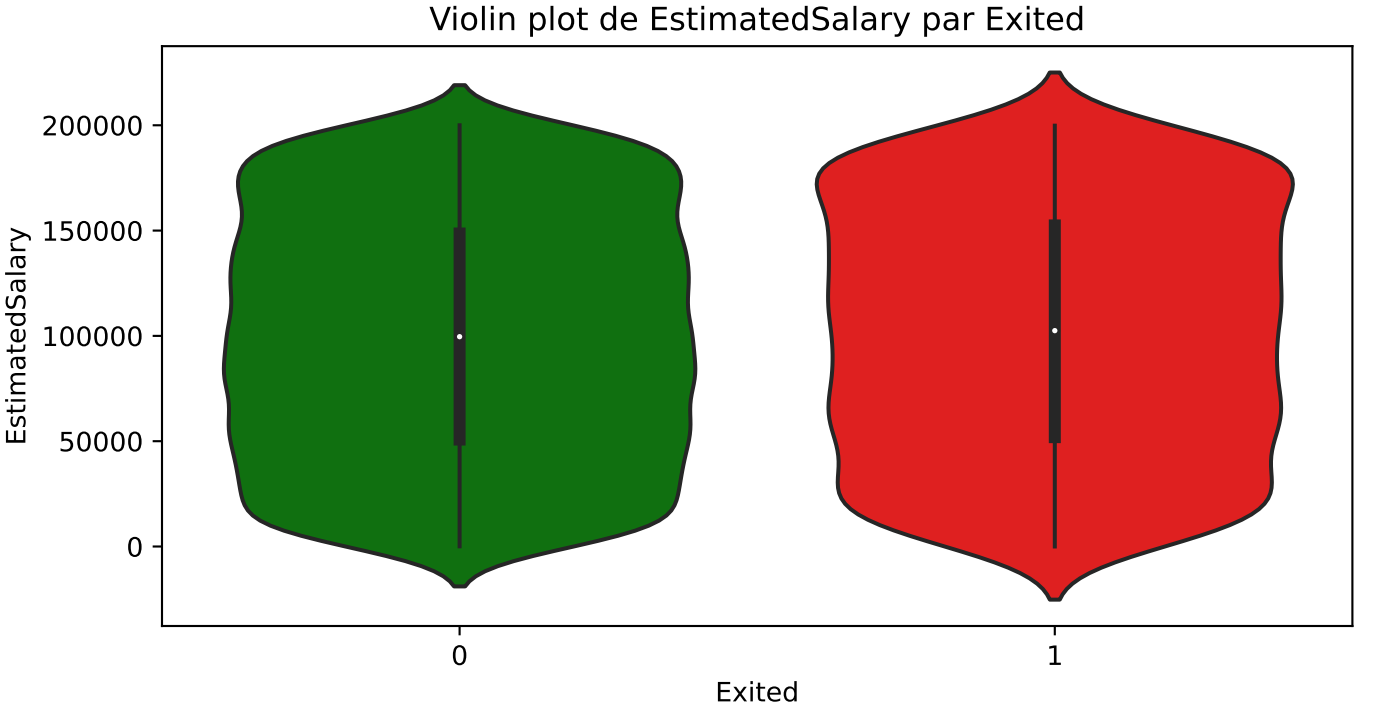
```
Variable : Balance

Statistiques globales :
count     10000.000000
mean      76485.889288
std       62397.405202
min           0.000000
25%           0.000000
50%       97198.540000
75%      127644.240000
max      250898.090000
Name: Balance, dtype: float64

Statistiques par Exited :
         count          mean           std  min         25%        50%  \
Exited
0       7962.0  72742.750663  62851.577108  0.0      0.0000   92063.06
1       2038.0  91109.476006  58346.483197  0.0  38591.2225  109344.23

                75%        max
Exited
0       126419.3300  221532.80
1       131423.6375  250898.09

T-test : t=-12.478, p=0.0000
```


Boxplot de Balance par Exited
250000
200000
150000
100000
50000
0
Balance
0
1
Exited

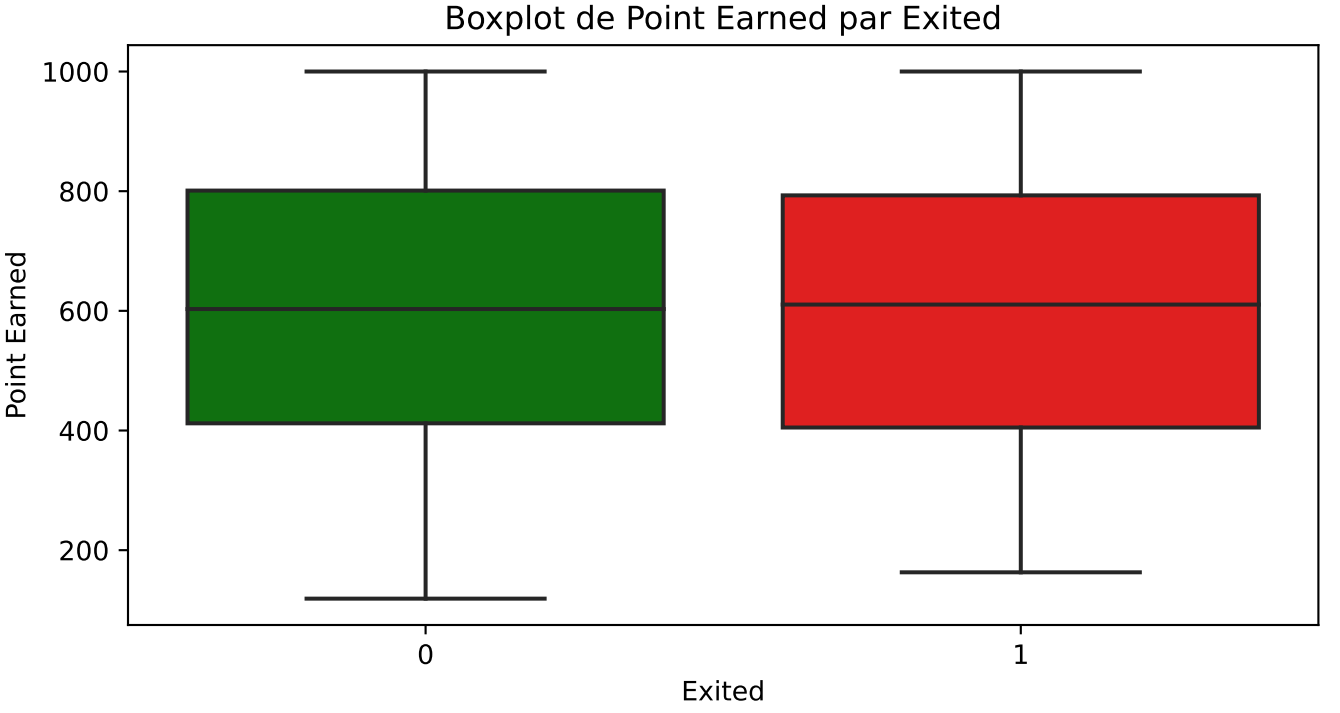

Violin plot de Balance par Exited
250000
200000
150000
100000
50000
0
Balance
0
1
Exited

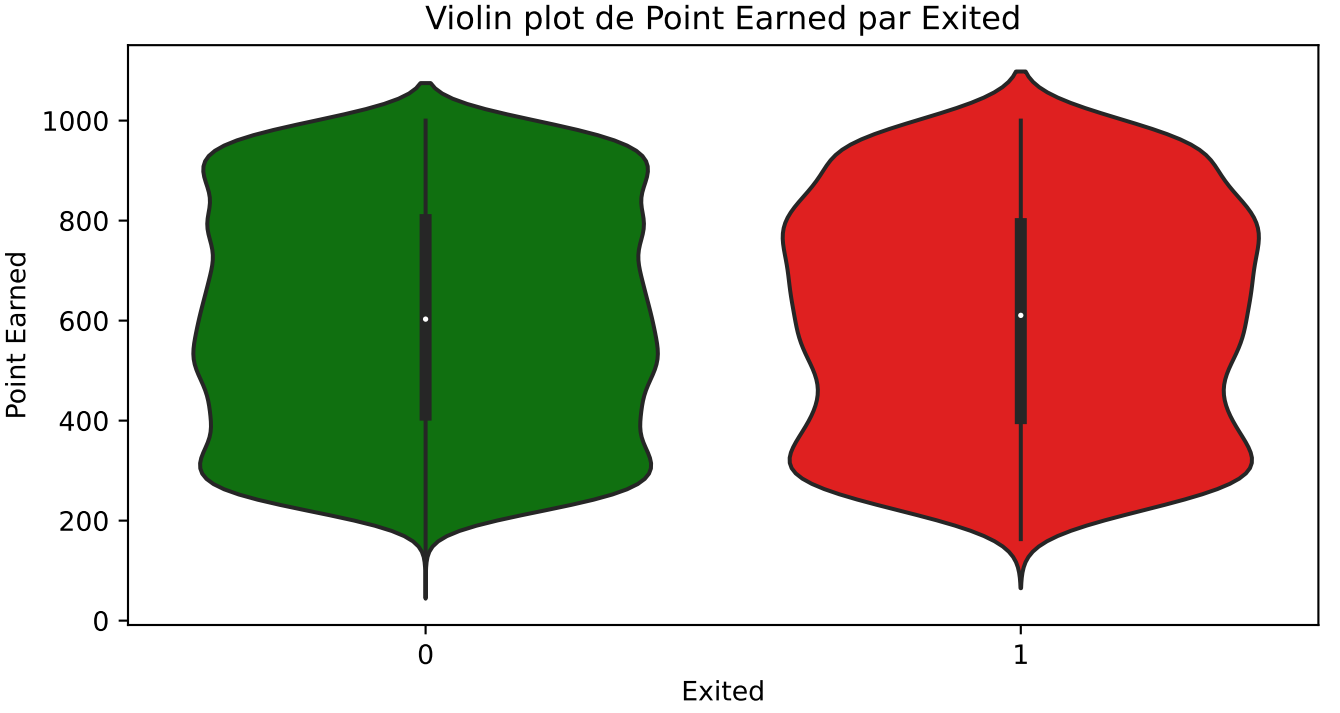
```
Variable : EstimatedSalary

Statistiques globales :
count     10000.000000
mean     100090.239881
std       57510.492818
min          11.580000
25%       51002.110000
50%      100193.915000
75%      149388.247500
max      199992.480000
Name: EstimatedSalary, dtype: float64

Statistiques par Exited :
         count           mean           std    min        25%         50%  \
Exited
0       7962.0   99726.853141  57399.956717  90.07  50783.295   99620.355
1       2038.0  101509.908783  57932.623392  11.58  51924.020  102489.335

                75%        max
Exited
0       148602.4450  199992.48
1       152443.8575  199808.10

T-test : t=-1.242, p=0.2143
```

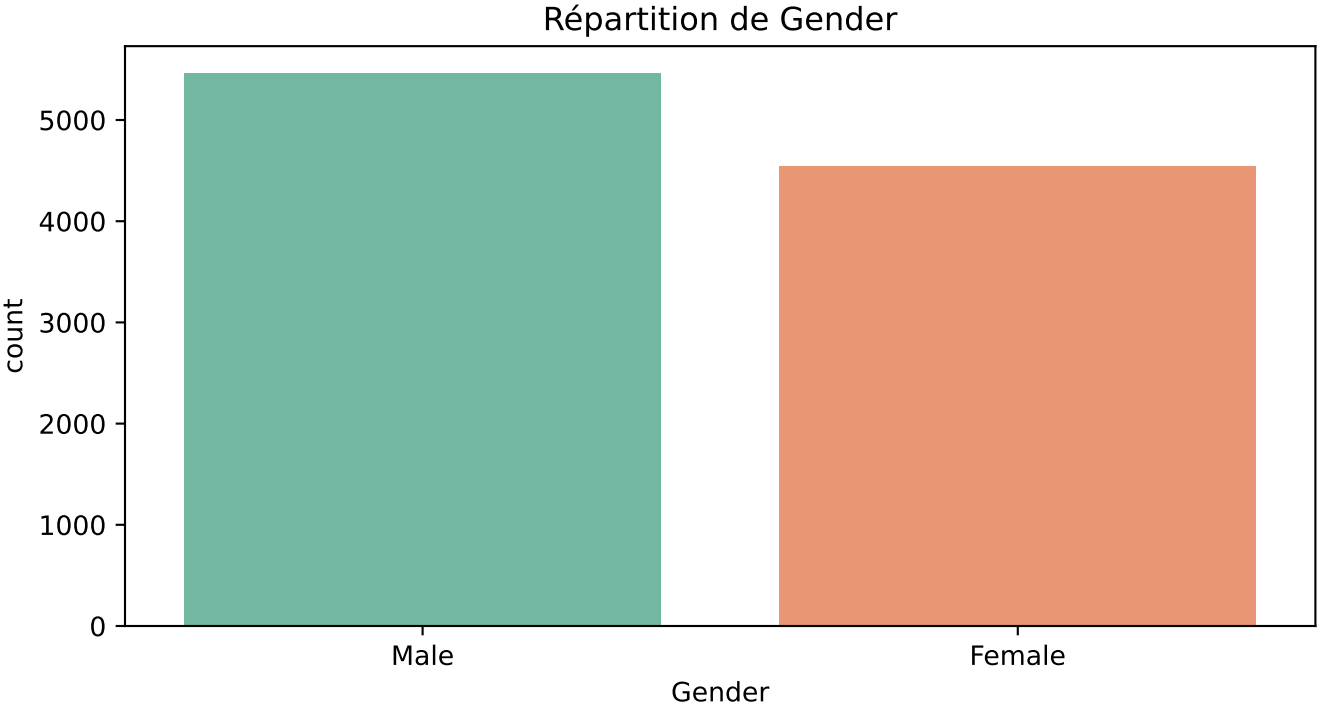

Boxplot de EstimatedSalary par Exited
EstimatedSalary
200000
175000
150000
125000
100000
75000
50000
25000
0
0
1
Exited


Violin plot de EstimatedSalary par Exited
EstimatedSalary
200000
150000
100000
50000
0
0
1
Exited

```
Variable : Point Earned

Statistiques globales :
count    10000.000000
mean       606.515100
std        225.924839
min        119.000000
25%        410.000000
50%        605.000000
75%        801.000000
max       1000.000000
Name: Point Earned, dtype: float64

Statistiques par Exited :
         count        mean         std    min    25%    50%    75%     max
Exited
0       7962.0  607.044084  226.091682  119.0  412.0  603.0  801.0  1000.0
1       2038.0  604.448479  225.315301  163.0  405.0  610.5  793.0  1000.0

T-test : t=0.464, p=0.6429
```


Boxplot de Point Earned par Exited
1000
800
600
400
200
Point Earned
0
1
Exited


Violin plot de Point Earned par Exited
Point Earned
1000
800
600
400
200
0
0
1
Exited


Répartition de Gender
5000
4000
3000
2000
1000
0
count
Male
Female
Gender

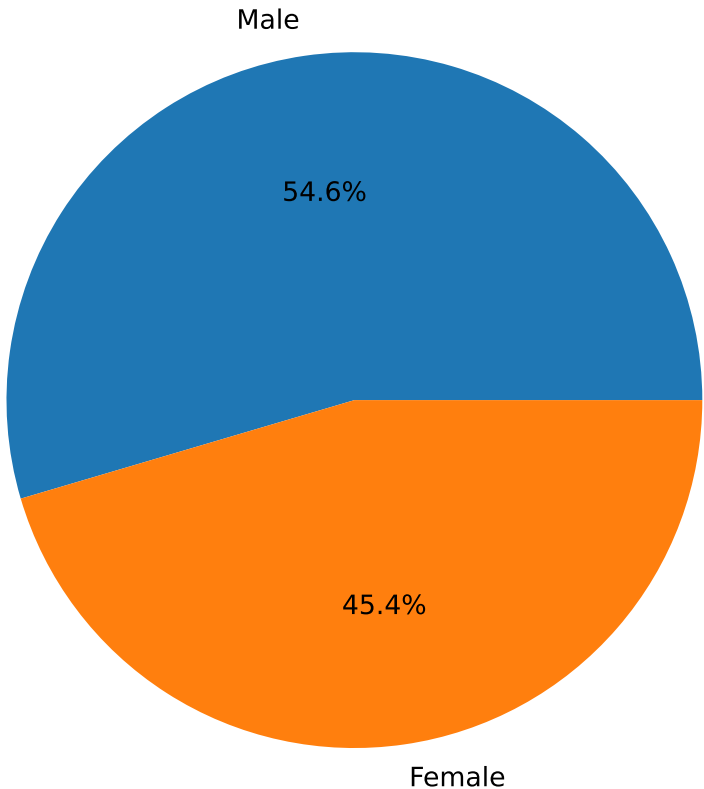
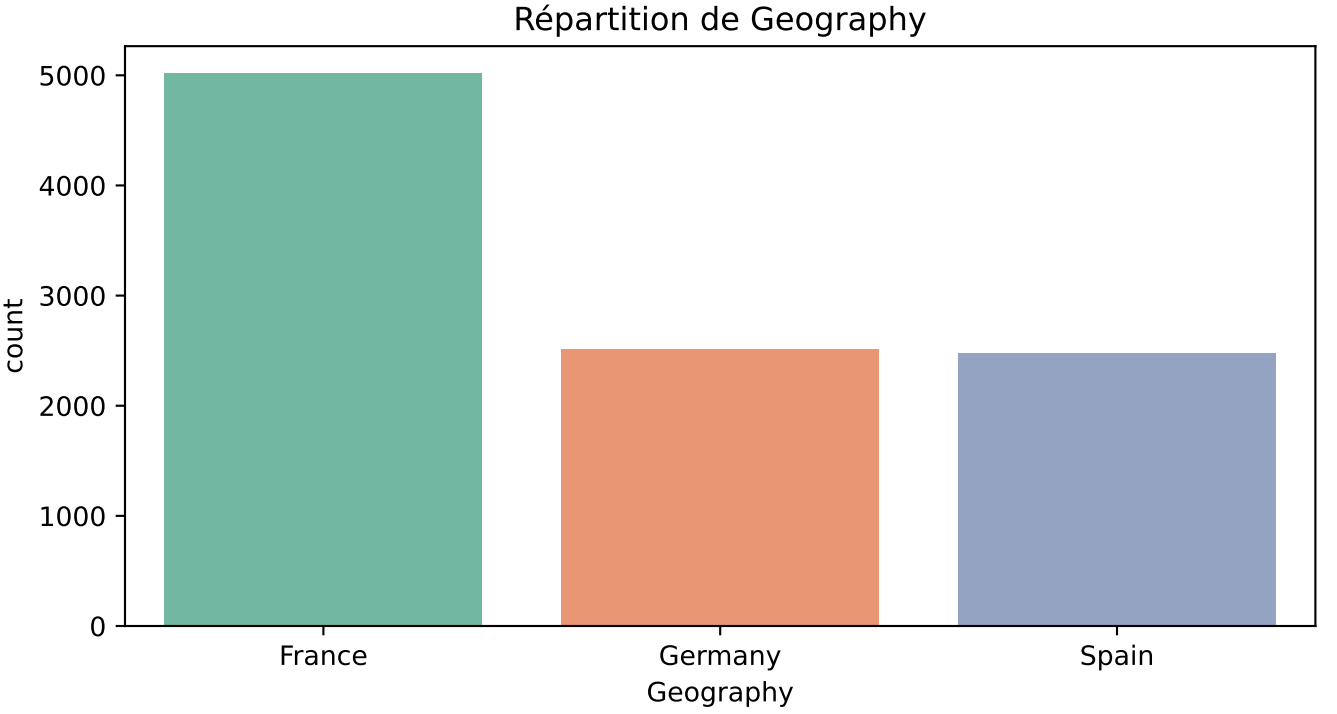


Diagramme circulaire de Gender
Male
54.6%
45.4%
Female


Répartition de Geography
5000
4000
3000
2000
1000
0
count
France
Germany
Spain
Geography

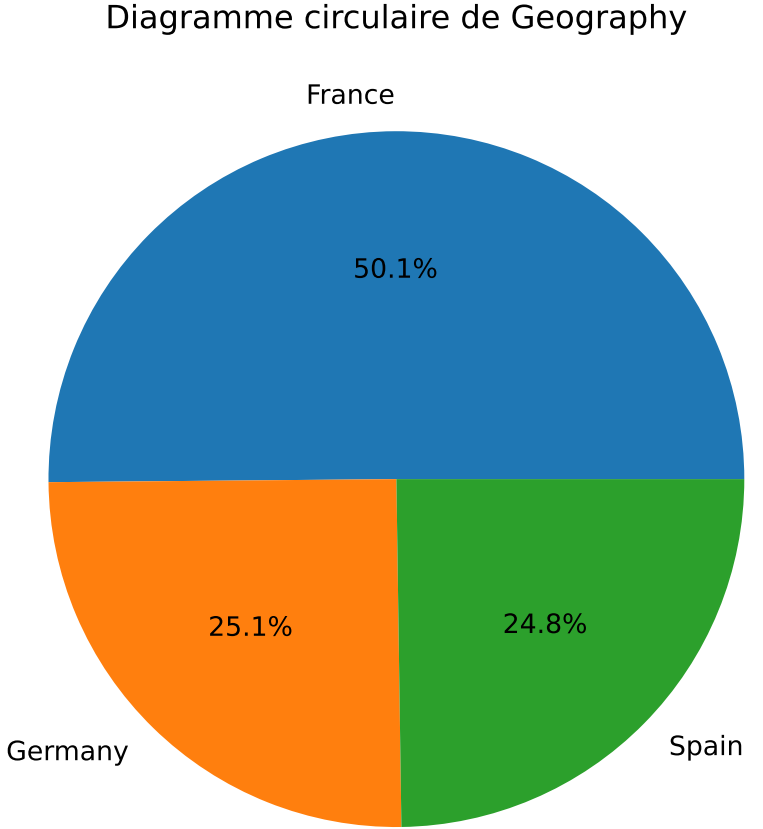
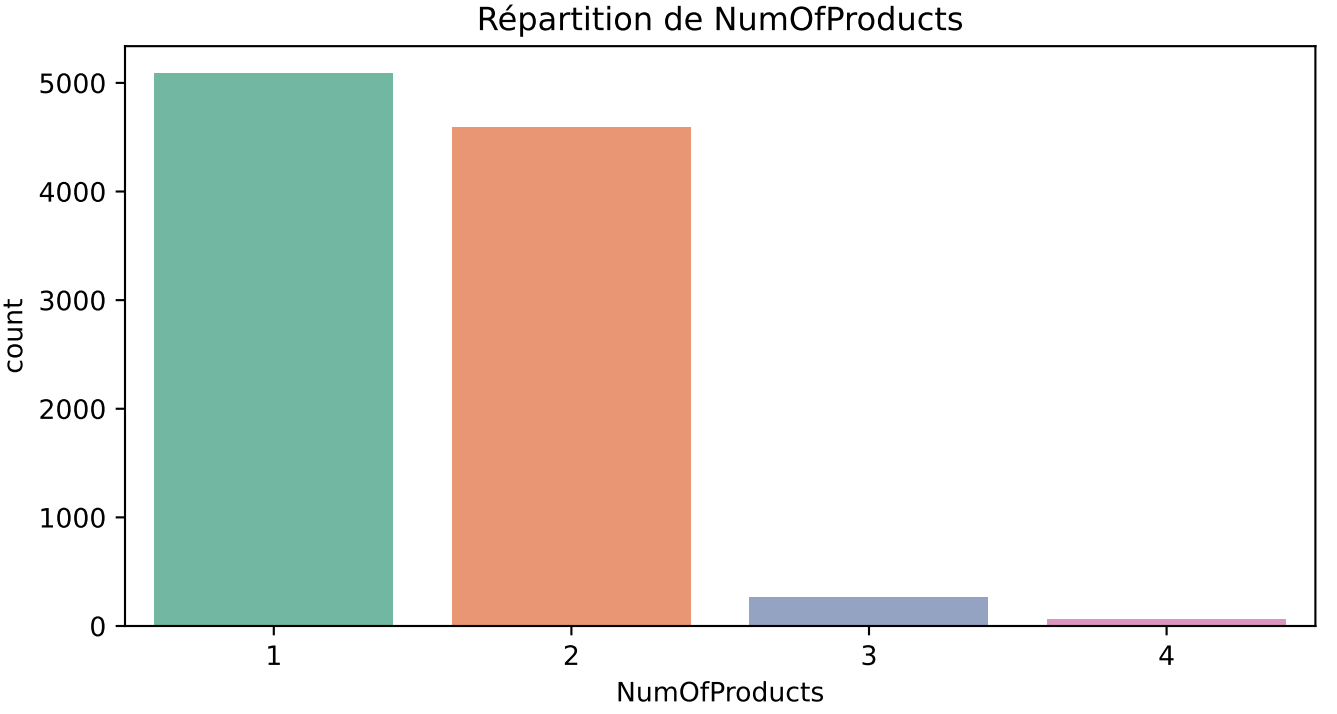
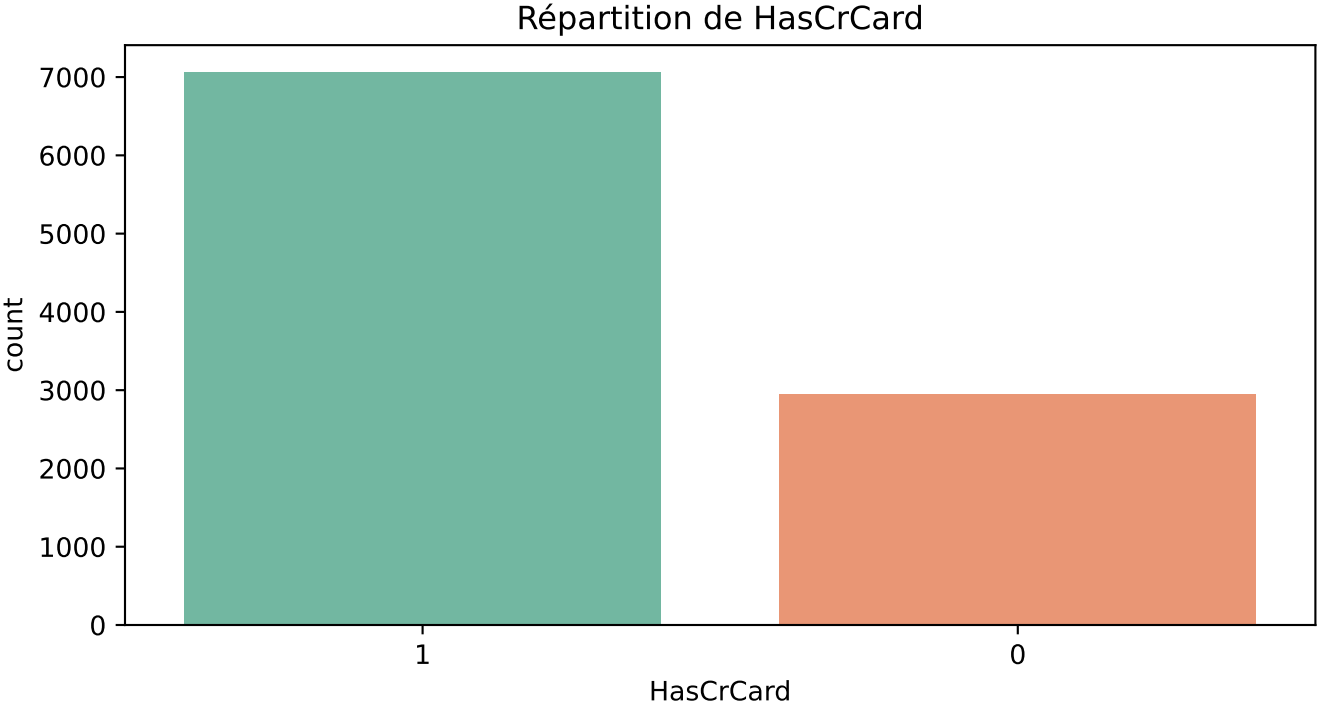
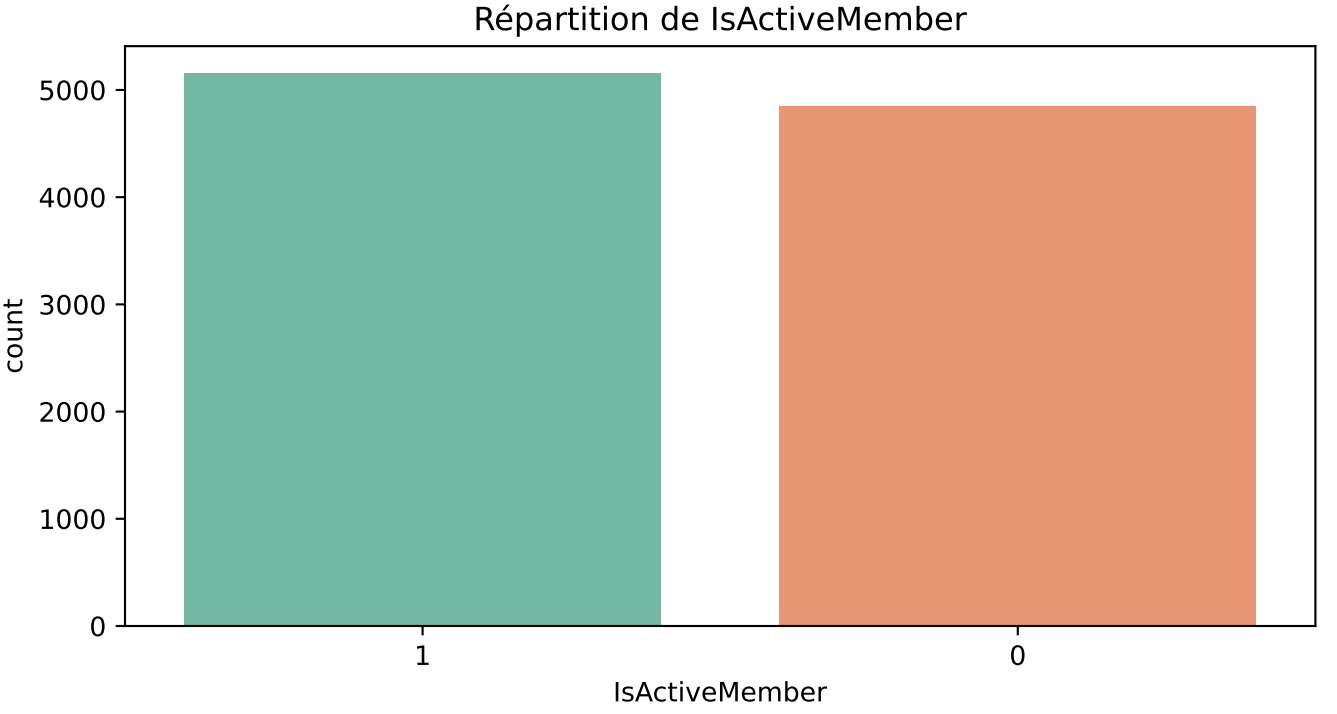
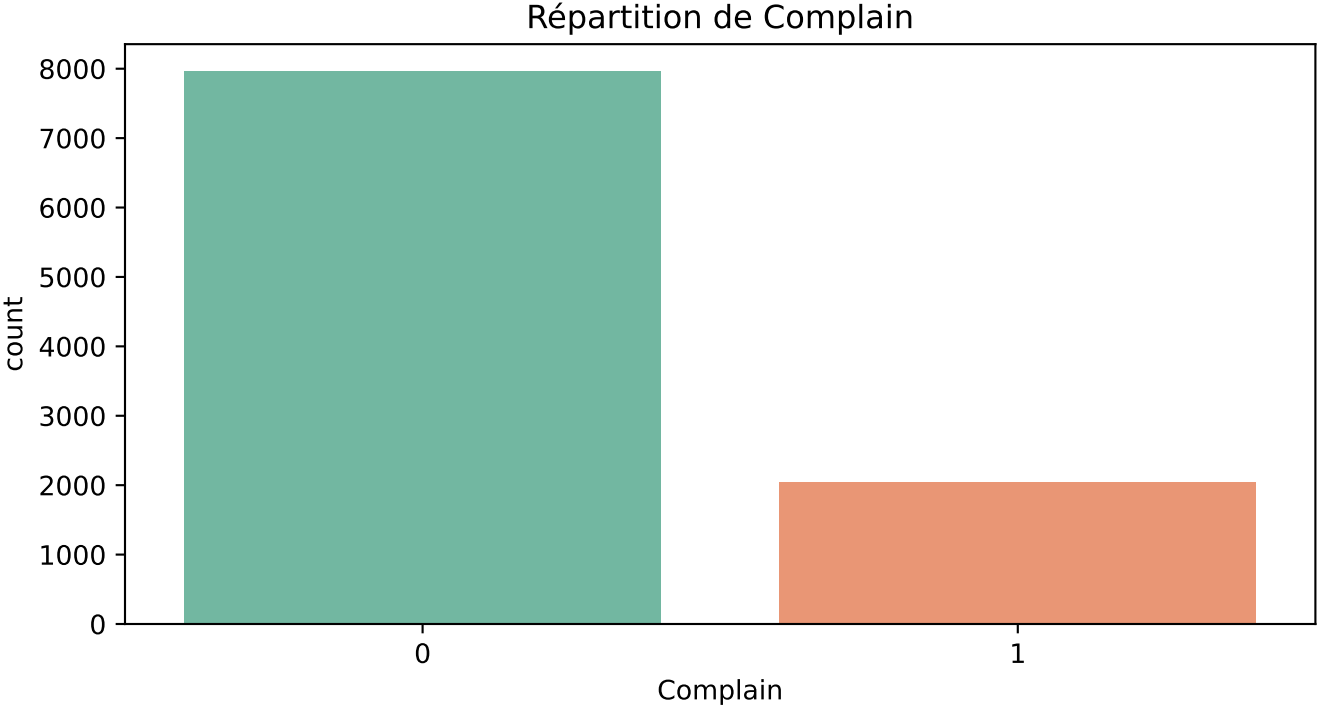


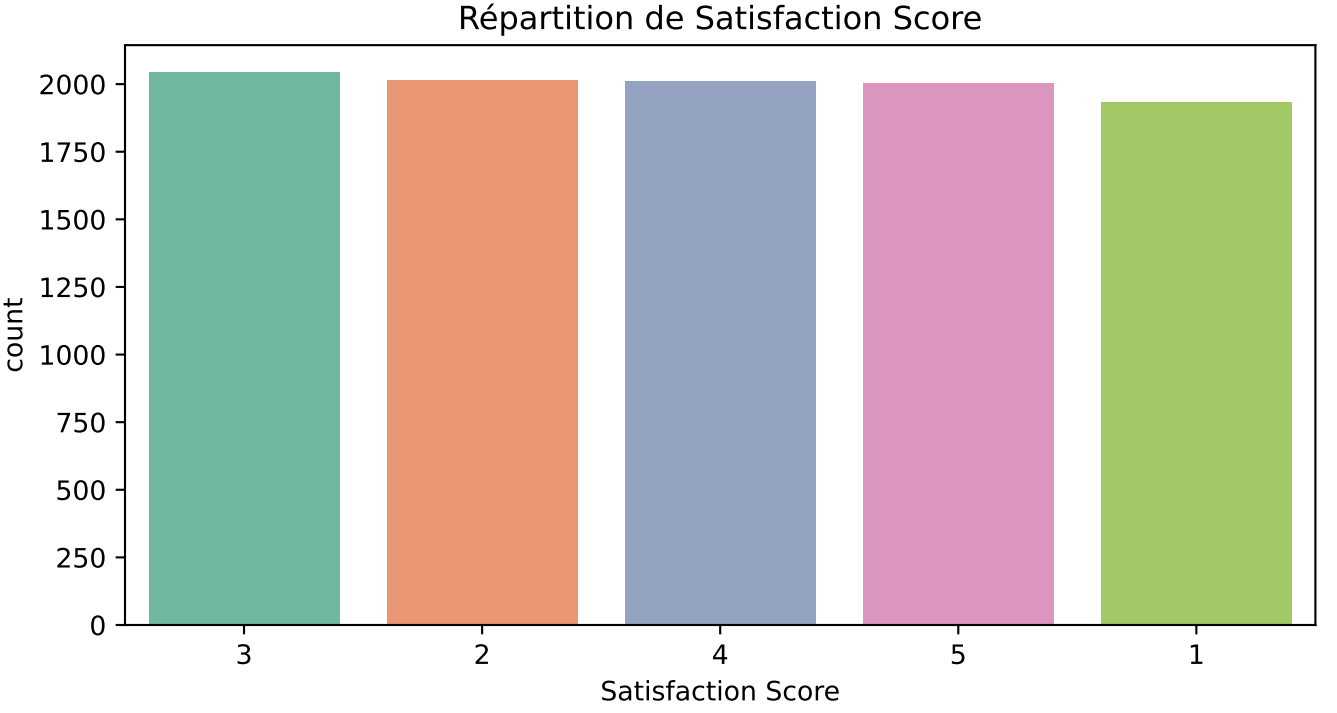
Diagramme circulaire de Geography
France
50.1%
25.1%
24.8%
Germany
Spain

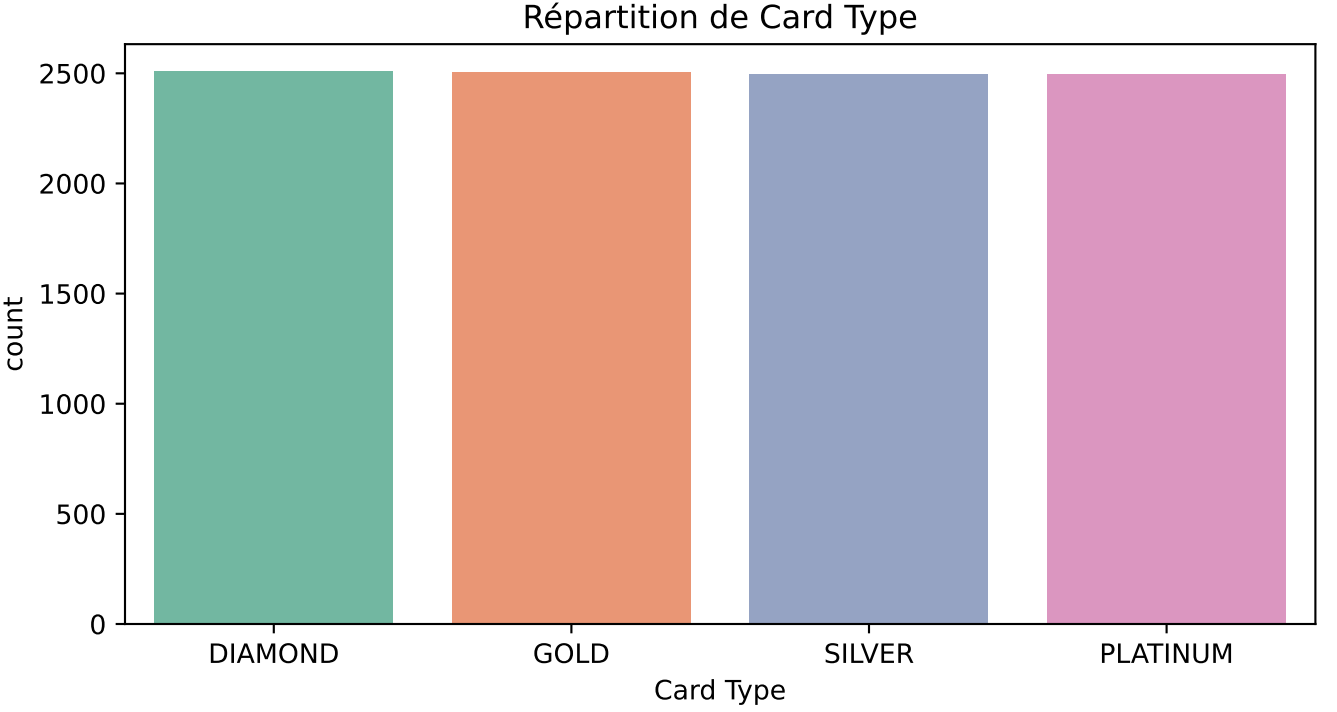

Répartition de NumOfProducts
count
5000
4000
3000
2000
1000
0
1
2
3
4
NumOfProducts

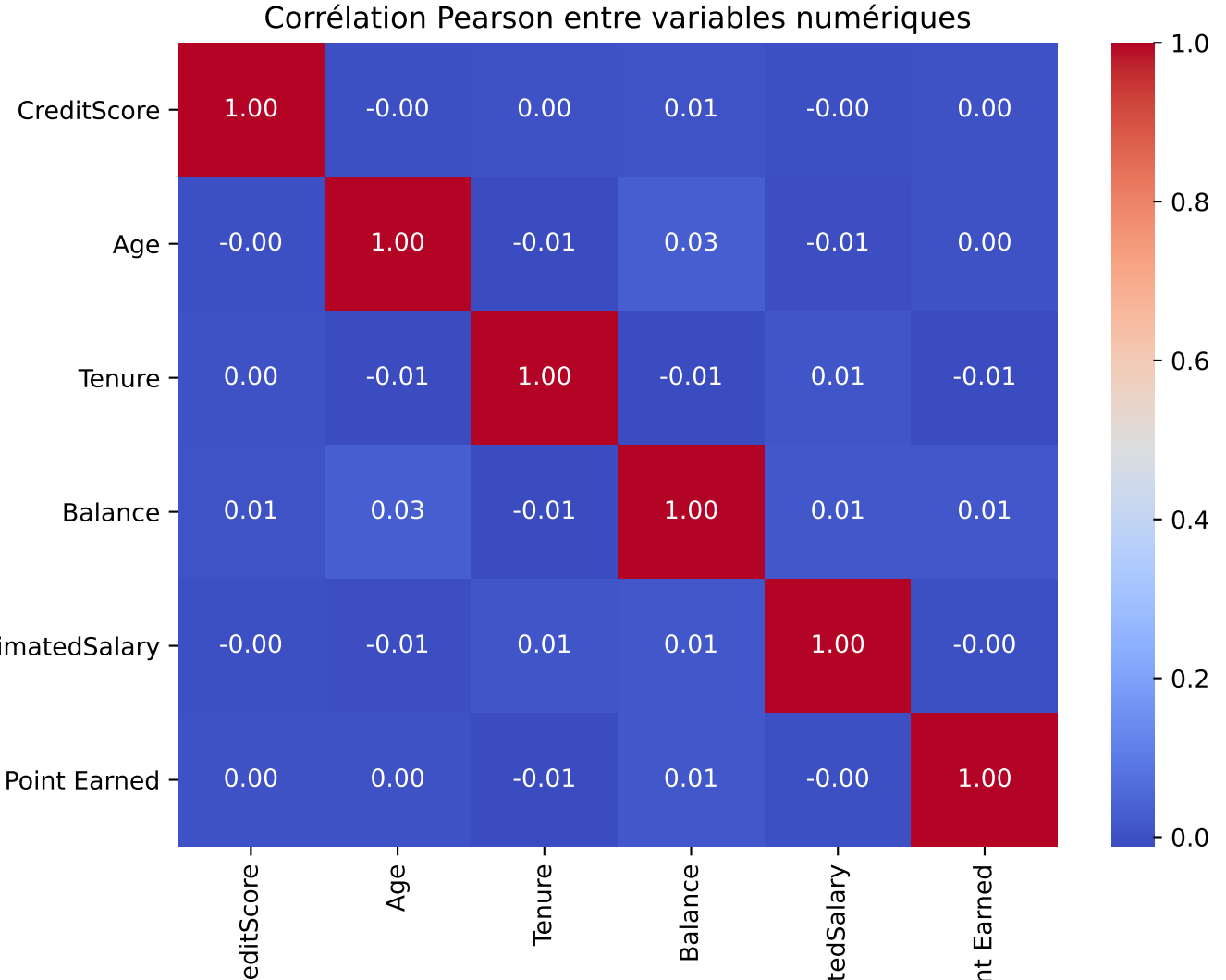

Répartition de HasCrCard
7000
6000
5000
4000
3000
2000
1000
0
count
1
0
HasCrCard

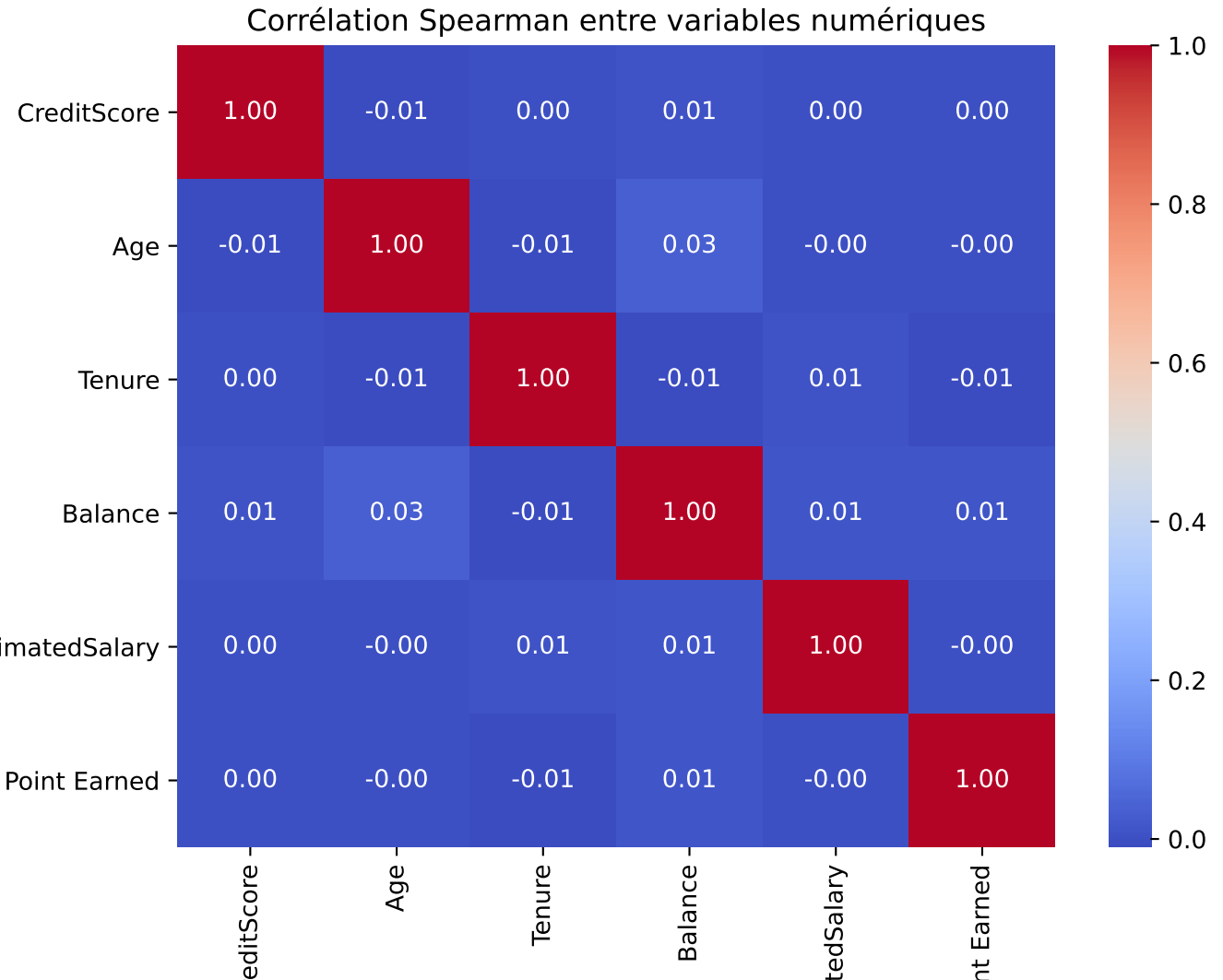

Répartition de IsActiveMember
count
5000
4000
3000
2000
1000
0
1
0
IsActiveMember


Répartition de Complain
8000
7000
6000
5000
4000
3000
2000
1000
0
count
0
1
Complain


Répartition de Satisfaction Score
count
2000
1750
1500
1250
1000
750
500
250
0
3
2
4
5
1
Satisfaction Score


Répartition de Card Type
2500
2000
1500
1000
500
0
count
DIAMOND
GOLD
SILVER
PLATINUM
Card Type


Corrélation Pearson entre variables numériques
CreditScore
Age
Tenure
Balance
imatedSalary
Point Earned
1.00 -0.00 0.00 0.01 -0.00 0.00
-0.00 1.00 -0.01 0.03 -0.01 0.00
0.00 -0.01 1.00 -0.01 0.01 -0.01
0.01 0.03 -0.01 1.00 0.01 0.01
-0.00 -0.01 0.01 0.01 1.00 -0.00
0.00 0.00 -0.01 0.01 -0.00 1.00
editScore
Age
Tenure
Balance
tedSalary
nt Earned
1.0
0.8
0.6
0.4
0.2
0.0


Corrélation Spearman entre variables numériques
CreditScore
Age
Tenure
Balance
imatedSalary
Point Earned
1.00 -0.01 0.00 0.01 0.00 0.00
-0.01 1.00 -0.01 0.03 -0.00 -0.00
0.00 -0.01 1.00 -0.01 0.01 -0.01
0.01 0.03 -0.01 1.00 0.01 0.01
0.00 -0.00 0.01 0.01 1.00 -0.00
0.00 -0.00 -0.01 0.01 -0.00 1.00
editScore
Age
Tenure
Balance
tedSalary
nt Earned
1.0
0.8
0.6
0.4
0.2
0.0

```
Variable : Gender vs Exited

Table de contingence :
Exited     0     1
Gender
Female  3404  1139
Male    4558   899

Chi2=112.397, p-value=0.0000
```

```
Variable : Geography vs Exited

Table de contingence :
Exited        0    1
Geography
France     4203  811
Germany    1695  814
Spain      2064  413

Chi2=300.626, p-value=0.0000
```

```
Variable : NumOfProducts vs Exited

Table de contingence :
Exited            0     1
NumOfProducts
1              3675  1409
2              4241   349
3                46   220
4                 0    60

Chi2=1501.505, p-value=0.0000
```

```
Variable : HasCrCard vs Exited

Table de contingence :
Exited        0     1
HasCrCard
0          2332   613
1          5630  1425

Chi2=0.449, p-value=0.5026
```

```
Variable : IsActiveMember vs Exited

Table de contingence :
Exited             0     1
IsActiveMember
0               3546  1303
1               4416   735

Chi2=243.695, p-value=0.0000
```

```
Variable : Complain vs Exited

Table de contingence :
Exited       0     1
Complain
0         7952     4
1           10  2034

Chi2=9907.907, p-value=0.0000
```

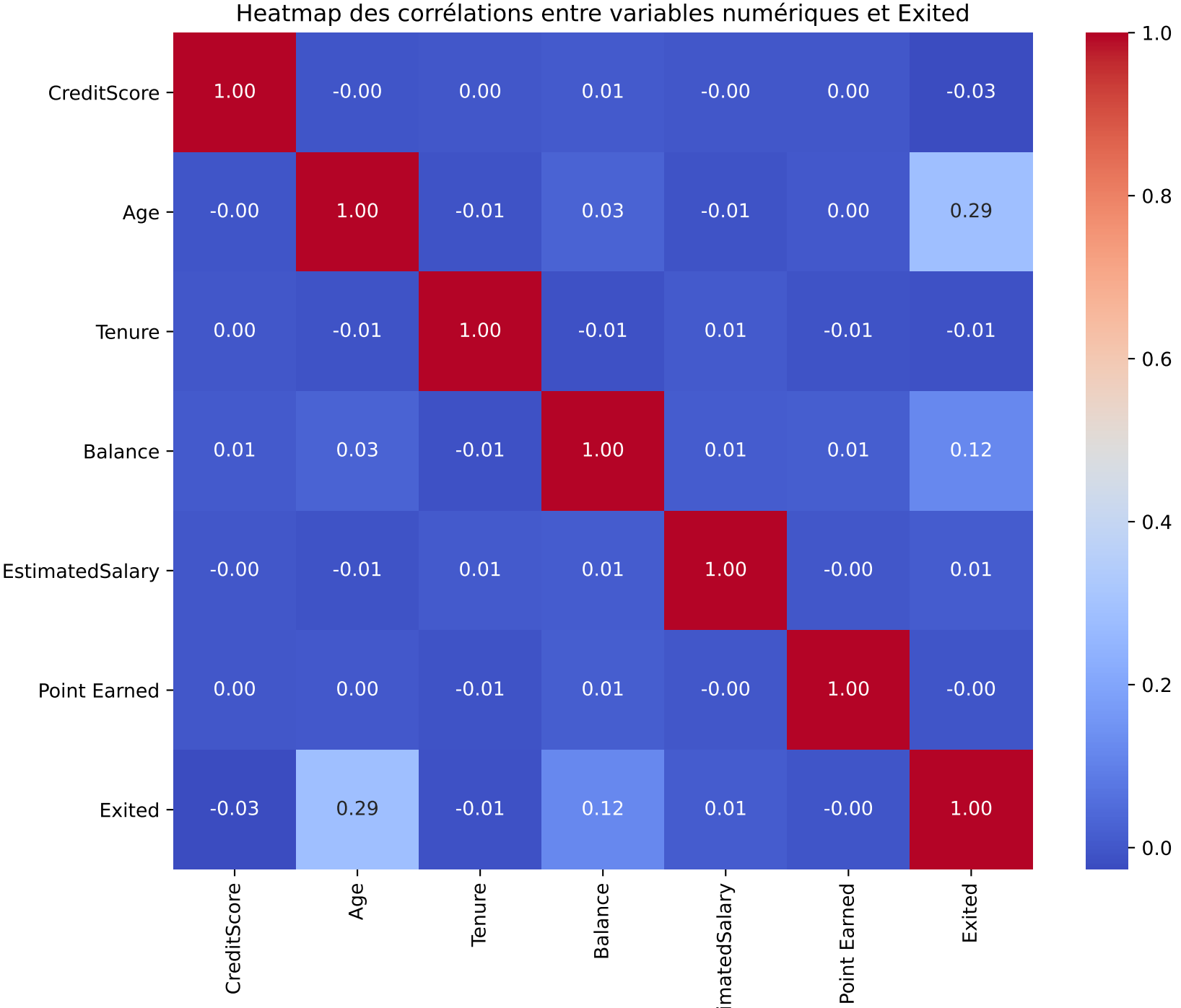
Variable : Satisfaction Score vs Exited

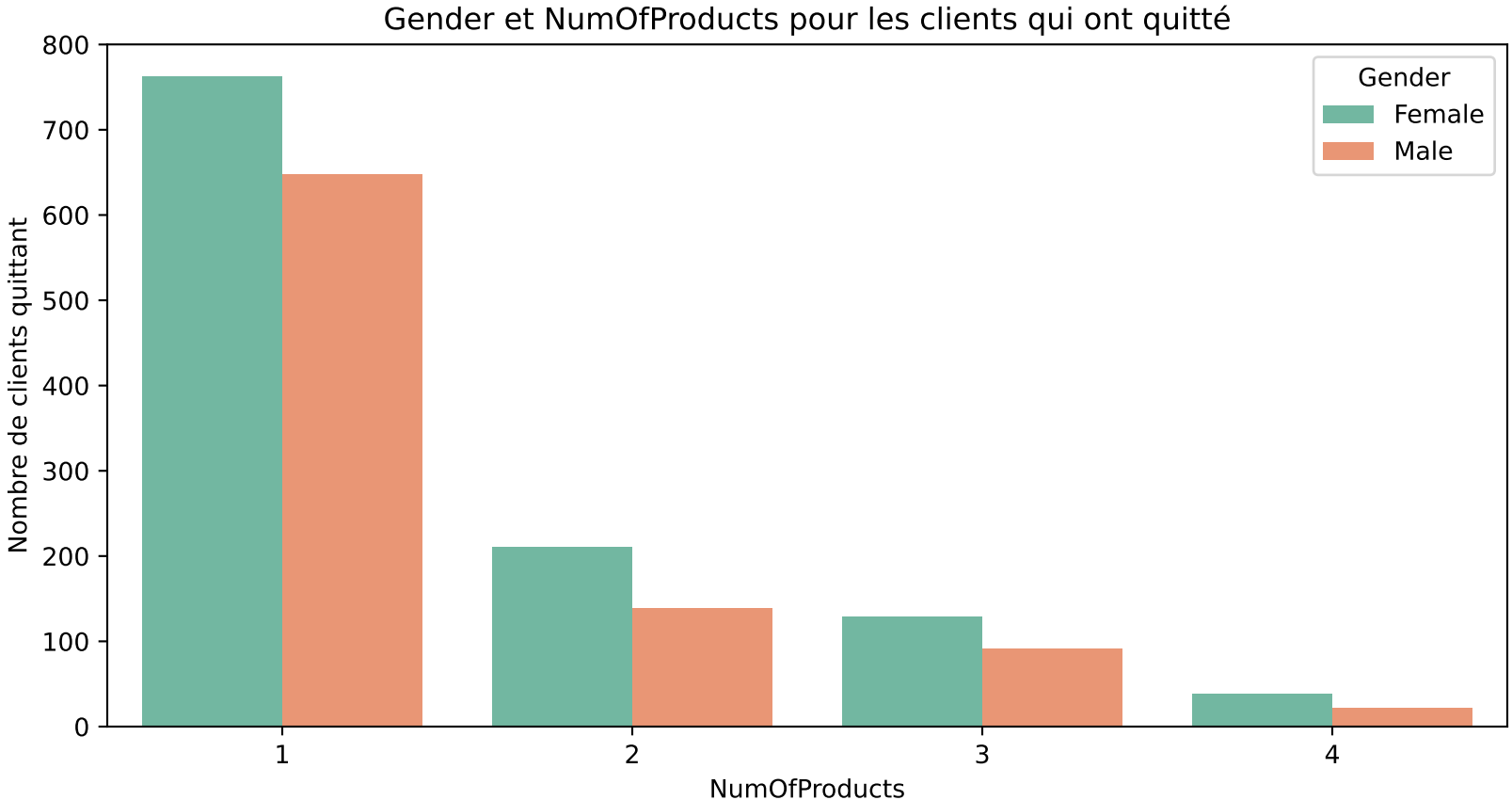
Table de contingence :

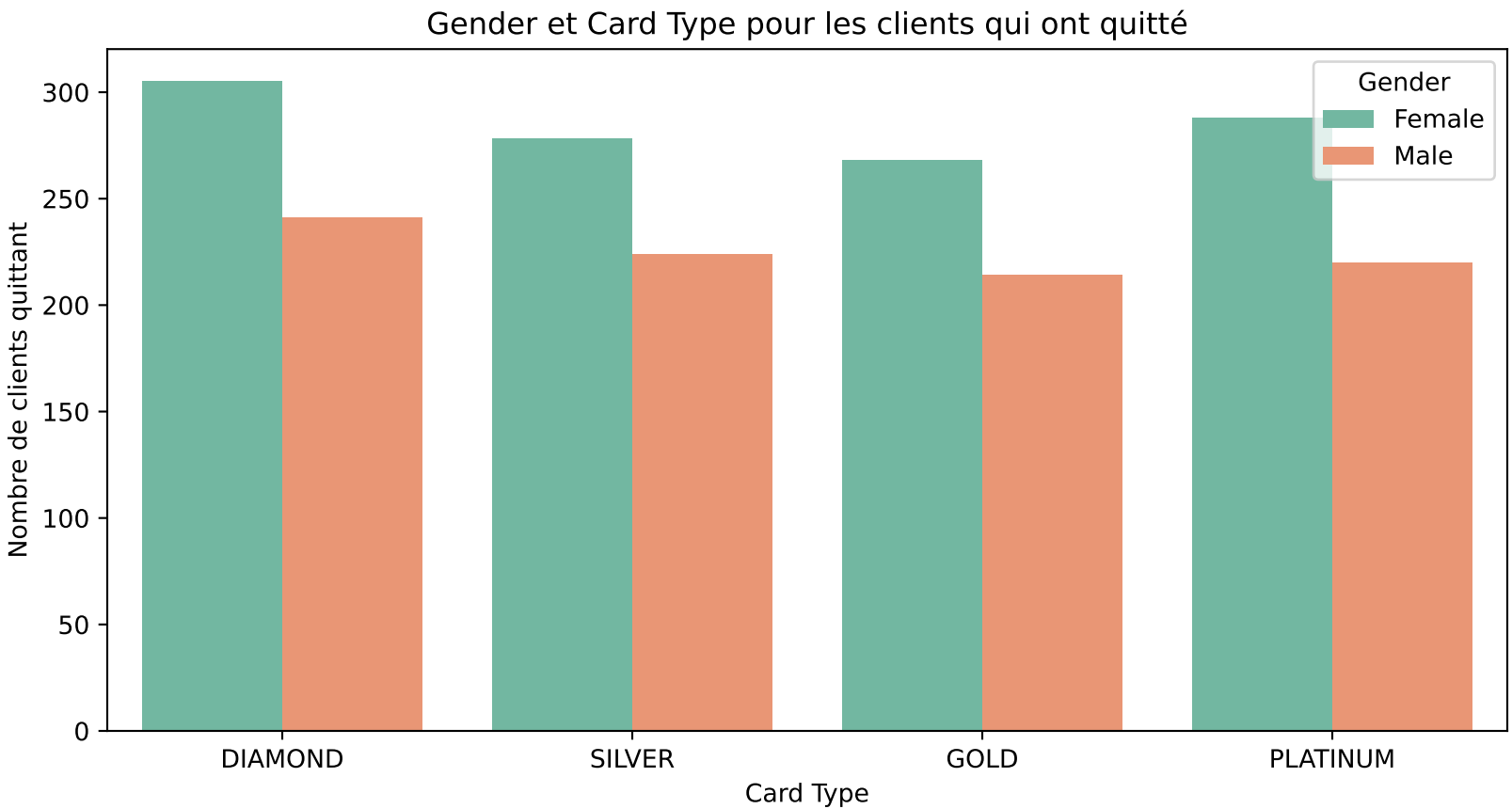
Exited	0	1
Satisfaction Score		
1	1545	387
2	1575	439
3	1641	401
4	1594	414
5	1607	397

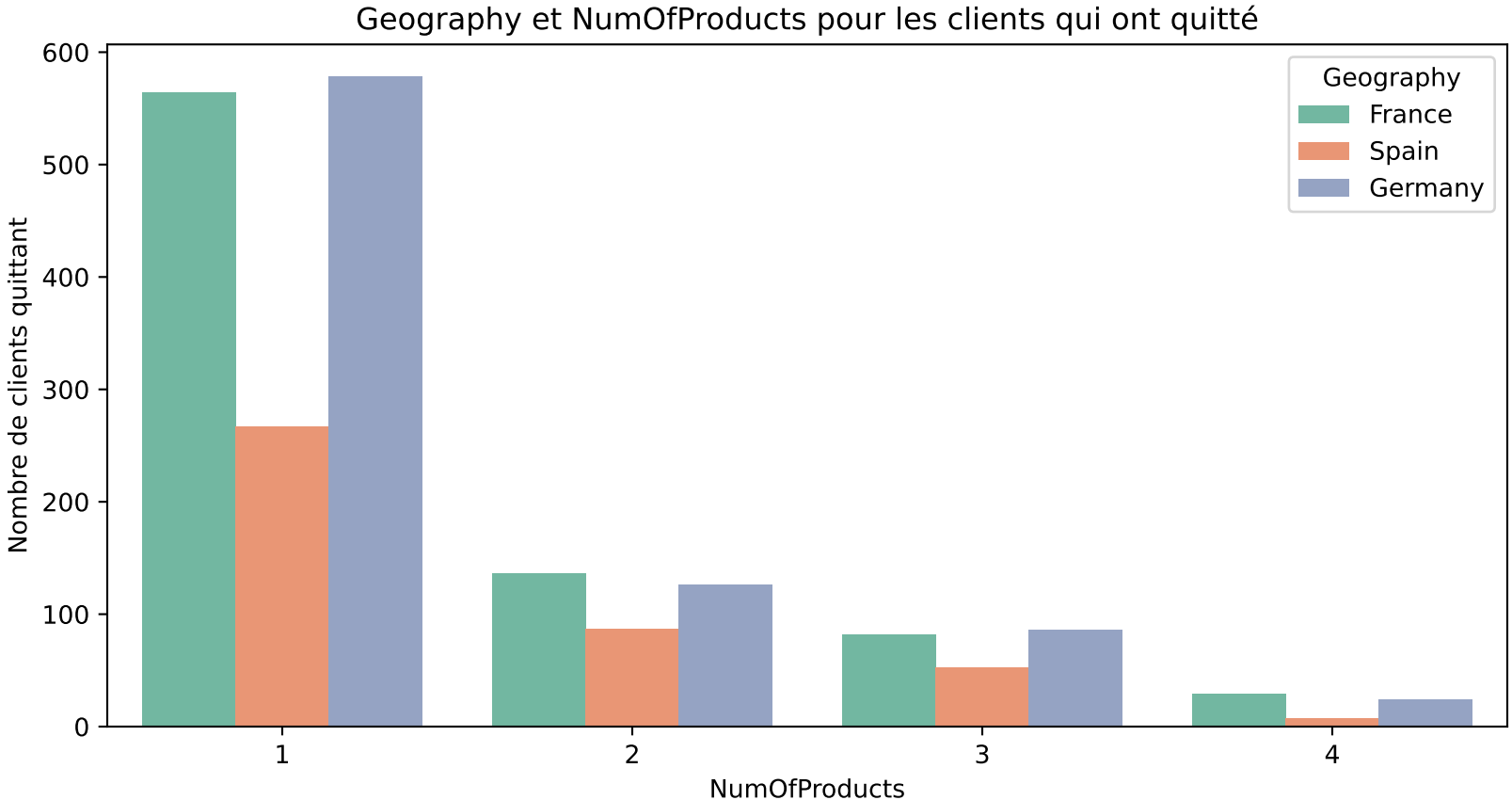
Chi2=3.803, p-value=0.4334

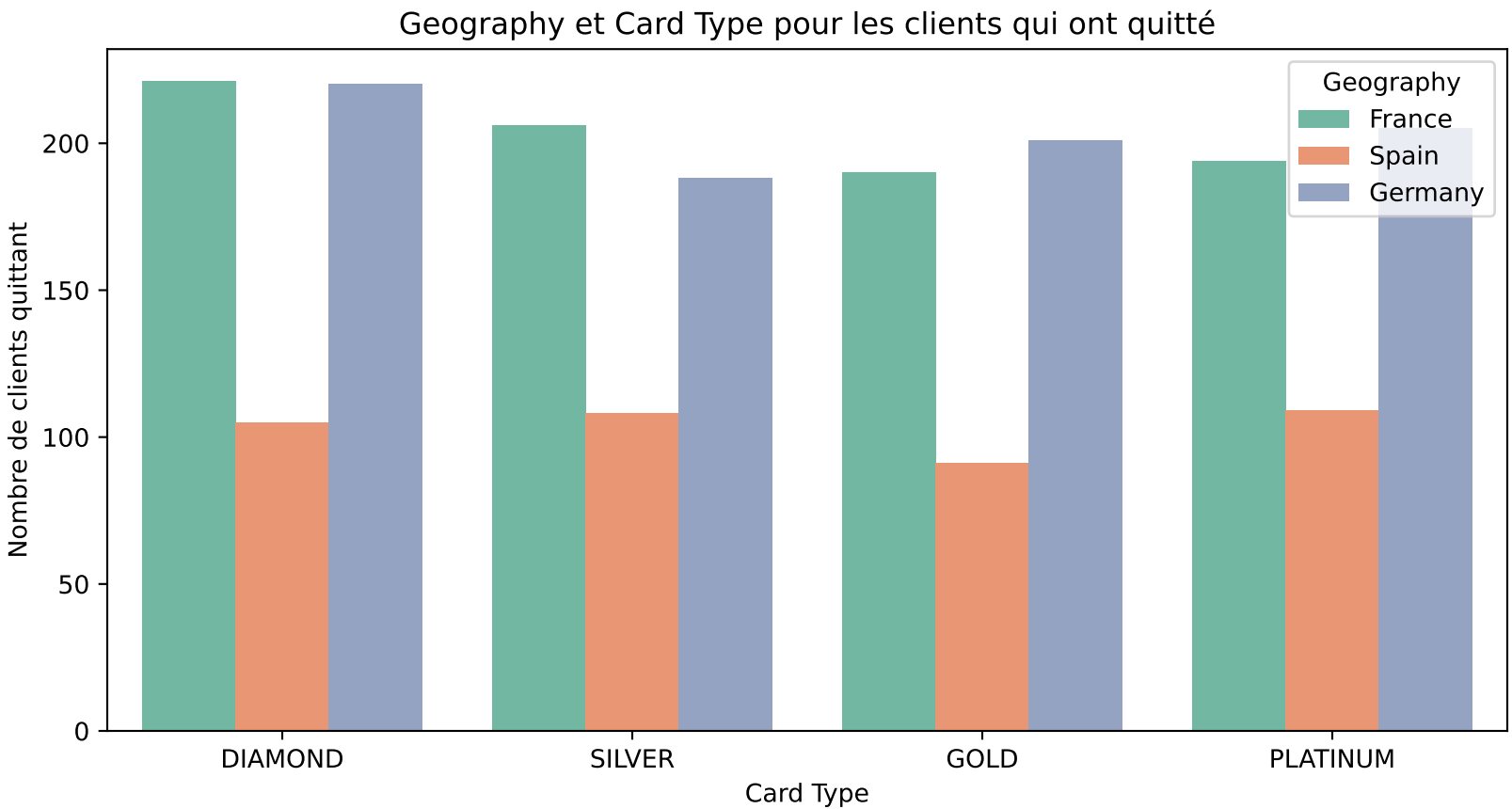
```
Variable : Card Type vs Exited

Table de contingence :
Exited        0    1
Card Type
DIAMOND    1961  546
GOLD       2020  482
PLATINUM   1987  508
SILVER     1994  502

Chi2=5.053, p-value=0.1679
```

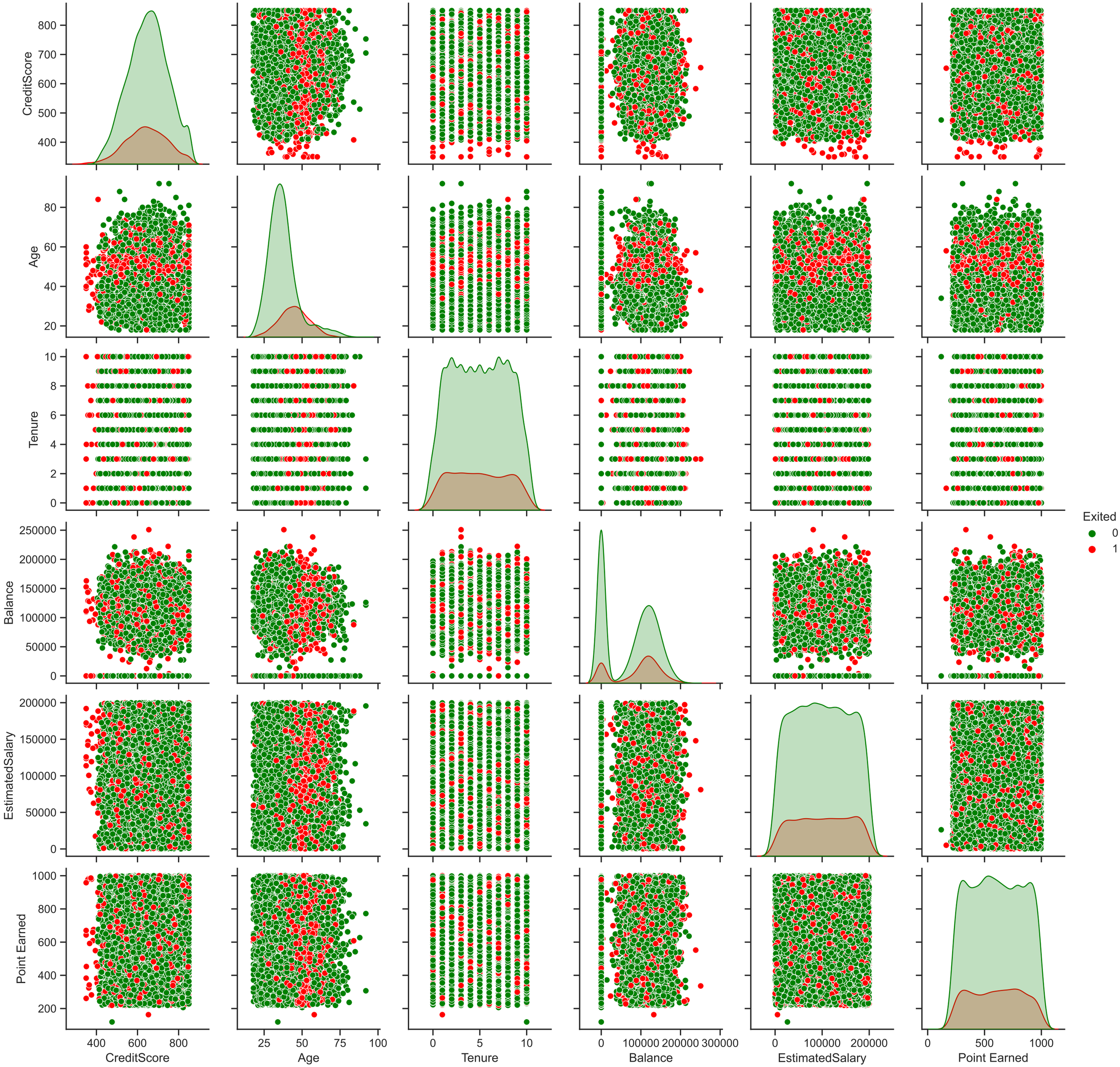

Heatmap des corrélations entre variables numériques et Exited
CreditScore
Age
Tenure
Balance
EstimatedSalary
Point Earned
Exited
1.00 -0.00 0.00 0.01 -0.00 0.00 -0.03
-0.00 1.00 -0.01 0.03 -0.01 0.00 0.29
0.00 -0.01 1.00 -0.01 0.01 -0.01 -0.01
0.01 0.03 -0.01 1.00 0.01 0.01 0.12
-0.00 -0.01 0.01 0.01 1.00 -0.00 0.01
0.00 0.00 -0.01 0.01 -0.00 1.00 -0.00
-0.03 0.29 -0.01 0.12 0.01 -0.00 1.00
1.0
0.8
0.6
0.4
0.2
0.0


Gender et NumOfProducts pour les clients qui ont quitté
Nombre de clients quittant
NumOfProducts
Gender
Female
Male
800
700
600
500
400
300
200
100
0
1
2
3
4


Gender et Card Type pour les clients qui ont quitté
Nombre de clients quittant
0
50
100
150
200
250
300
DIAMOND
SILVER
GOLD
PLATINUM
Card Type
Gender
Female
Male


Geography et NumOfProducts pour les clients qui ont quitté
Nombre de clients quittant
NumOfProducts
Geography
France
Spain
Germany
0
100
200
300
400
500
600
1
2
3
4


Geography et Card Type pour les clients qui ont quitté
Geography
France
Spain
Germany
Nombre de clients quittant
0
50
100
150
200
DIAMOND
SILVER
GOLD
PLATINUM
Card Type


CreditScore
Age
Tenure
Balance
EstimatedSalary
Point Earned
Exited
0
1