

Male

Age

30

1892

Tenure

5

010

Balance

50000

0250000

Number of Products

1

14

Has Credit Card?

0

Is Active Member?

0

Estimated Salary

50000

0200000

Customer Churn Predictor

Dataset Information:

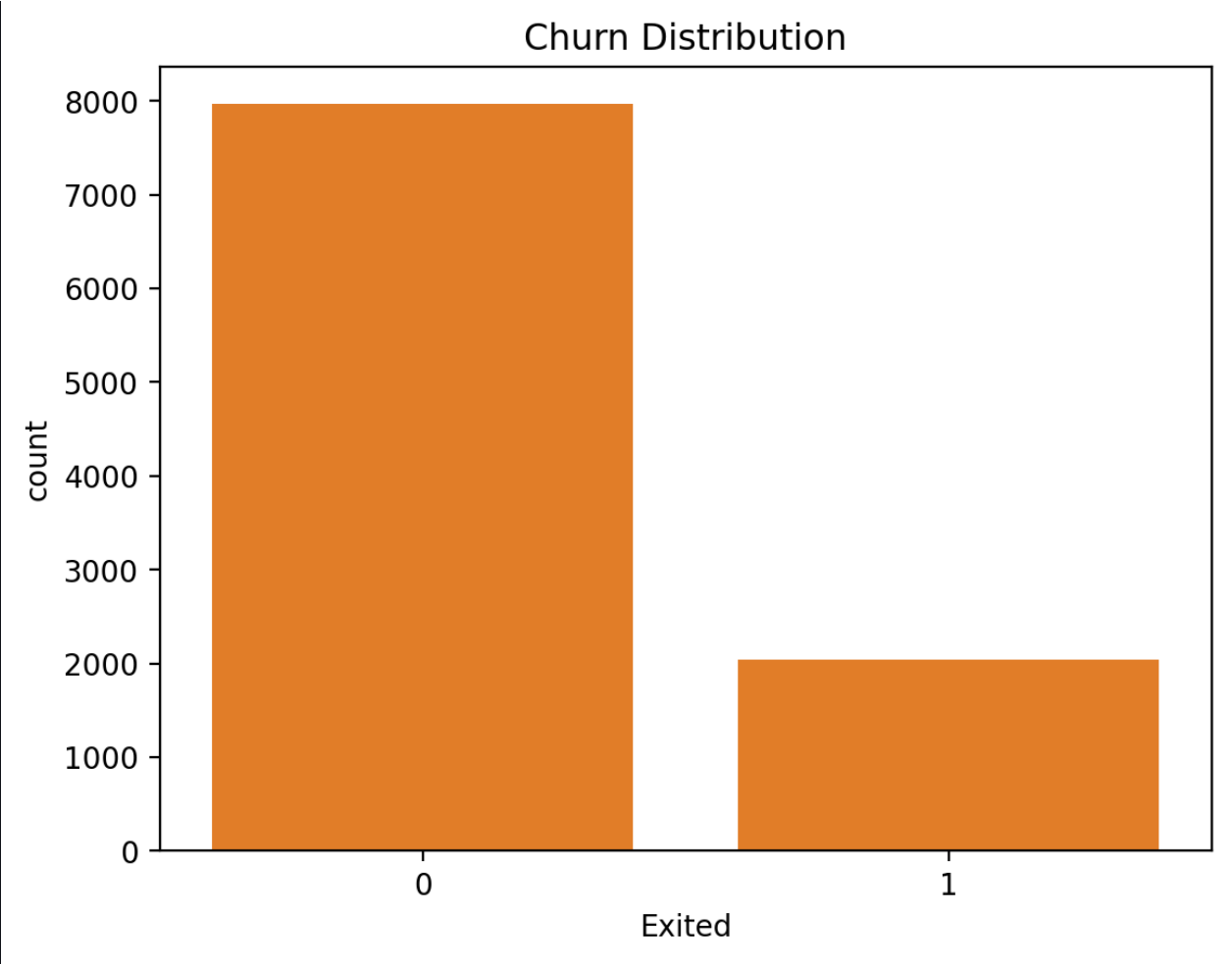
None

	RowNumber	CustomerId	CreditScore	Age	Tenure	Balance	NumOfProducts	HasCr
count	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10
mean	5,000.5	15,690,940.5694	650.5288	38.9218	5.0128	76,485.8893	1.5302	0.7
std	2,886.8957	71,936.1861	96.6533	10.4878	2.8922	62,397.4052	0.5817	0.4
min	1	15,565,701	350	18	0	0	1	
25%	2,500.75	15,628,528.25	584	32	3	0	1	
50%	5,000.5	15,690,738	652	37	5	97,198.54	1	
75%	7,500.25	15,753,233.75	718	44	7	127,644.24	2	
max	10,000	15,815,690	850	92	10	250,898.09	4	

	RowNumber	CustomerId	Surname	CreditScore	Geography	Gender	Age	Tenure	Balance
0	1	15,634,602	Hargrave	619	France	Female	42	2	0
1	2	15,647,311	Hill	608	Spain	Female	41	1	83,807.86
2	3	15,619,304	Onio	502	France	Female	42	8	159,660.8
3	4	15,701,354	Boni	699	France	Female	39	1	0
4	5	15,737,888	Mitchell	850	Spain	Female	43	2	125,510.82

Missing Values:

	0
RowNumber	0
CustomerId	0
Surname	0
CreditScore	0
Geography	0
Gender	0
Age	0
Tenure	0
Balance	0
NumOfProduct	0



Logistic Regression

precision recall f1-score support

0	0.83	0.97	0.89	1607
1	0.60	0.18	0.28	393
accuracy	0.82	2000		

macro avg 0.71 0.58 0.59 2000 weighted avg 0.78 0.82 0.77 2000

ROC-AUC Score: 0.5766683925763716

Random Forest

precision recall f1-score support

0	0.88	0.97	0.92	1607	
	1	0.79	0.45	0.58	393
accuracy				0.87	2000

macro avg 0.83 0.71 0.75 2000 weighted avg 0.86 0.87 0.85 2000

ROC-AUC Score: 0.7118395822348472

Gradient Boosting

precision recall f1-score support

0	0.88	0.96	0.92	1607	
	1	0.75	0.47	0.58	393
accuracy				0.86	2000

macro avg 0.82 0.71 0.75 2000 weighted avg 0.86 0.86 0.85 2000

ROC-AUC Score: 0.7141561014074873

Bank Customer Churn Prediction

Prediction

No Churn

Prediction Probability

0	1
0.8599	0.1401