



BANK CHURNERS

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AGENDA

- PRESENT THE OBJECTIVES
- METHODOLOGY
- MULTIPLE REGRESSION MODEL AND ITS PERFORMANCE
- FINDINGS
- RECOMMENDATIONS

1 – OBJECTIVES

OBJECTIVES



EXPLAIN METHODOLOGY

How did I build the
multiple regression
model?



PRESENT THE MULTIPLE REGRESSION MODEL

Predict the probability
of a customer
abandoning the bank's
services.



FINDINGS



RECOMMENDATIONS



2 — METHODOLOGY



STEPS TO BUILD THE PREDICTIVE MODEL

1) KNOW THE DATASET

10,127 OBSERVATIONS
21 VARIABLES IN TOTAL
19 POTENTIAL VARIABLES TO
BUILD THE MODEL

2) SPECIFY THE GOAL

PREDICT WHETHER OR NOT
A CUSTOMER WILL
ABANDON OUR SERVICES,
BASED ON CERTAIN
VARIABLES

3) CHOOSE THE BEST MODEL

SINCE I SEEK TO PREDICT A
CATEGORICAL VARIABLE
WITH TWO POSSIBLE
OUTCOMES, I OPT FOR A
LOGISTIC MULTIPLE
REGRESSION MODEL.

4) INCLUDE ALL VARIABLES AND TEST

ALL VARIABLES ARE INCLUDED
AT FIRST, SO I DON'T OMIT ANY
SIGNIFICANT VARIABLE.
THEN, THOSE THAT ARE NOT
STATISTICALLY SIGNIFICANT
ARE ELIMINATED, AND THE
FINAL OPTIMAL VERSION OF
THE MODEL IS ARRIVED AT.

5) TRAIN THE MODEL AND TEST ITS PERFORMANCE

USE PART OF YOUR DATASET
TO TRAIN THE MODEL (80%)
AND USE THE REST OF IT
(20%) TO TEST IF IT IS USEFUL

6) PUT IT TO WORK!

ALL SET TO USE IT AND
MAKE PREDICTIONS.
CONCLUDE HOW EACH
VARIABLE AFFECTS THE
PROBABILITY OF HAVING AN
ATTRITED CUSTOMER

3 - MULTIPLE REGRESSION MODEL AND ITS PERFORMANCE

VARIABLES

STATISTICALLY SIGNIFICANT

- GENDER
- DEPENDENT PEOPLE PER CLIENT
- MARITAL STATUS
- INCOME CATEGORY
- CARD CATEGORY
- TOTAL RELATIONSHIP COUNT
- MONTHS INACTIVE IN THE LAST 12 MONTHS
- CONTACTS COUNT IN THE LAST 12 MONTHS
- CREDIT LIMIT
- TOTAL REVOLVING BALANCE
- TOTAL AMOUNT CHANGE: Q4 -Q1
- TOTAL TRANSACTIONS AMOUNT
- TOTAL TRANSACTIONS COUNT
- TOTAL COUNT CHANGE: Q4-Q1

NON SIGNIFICANT VARIABLES

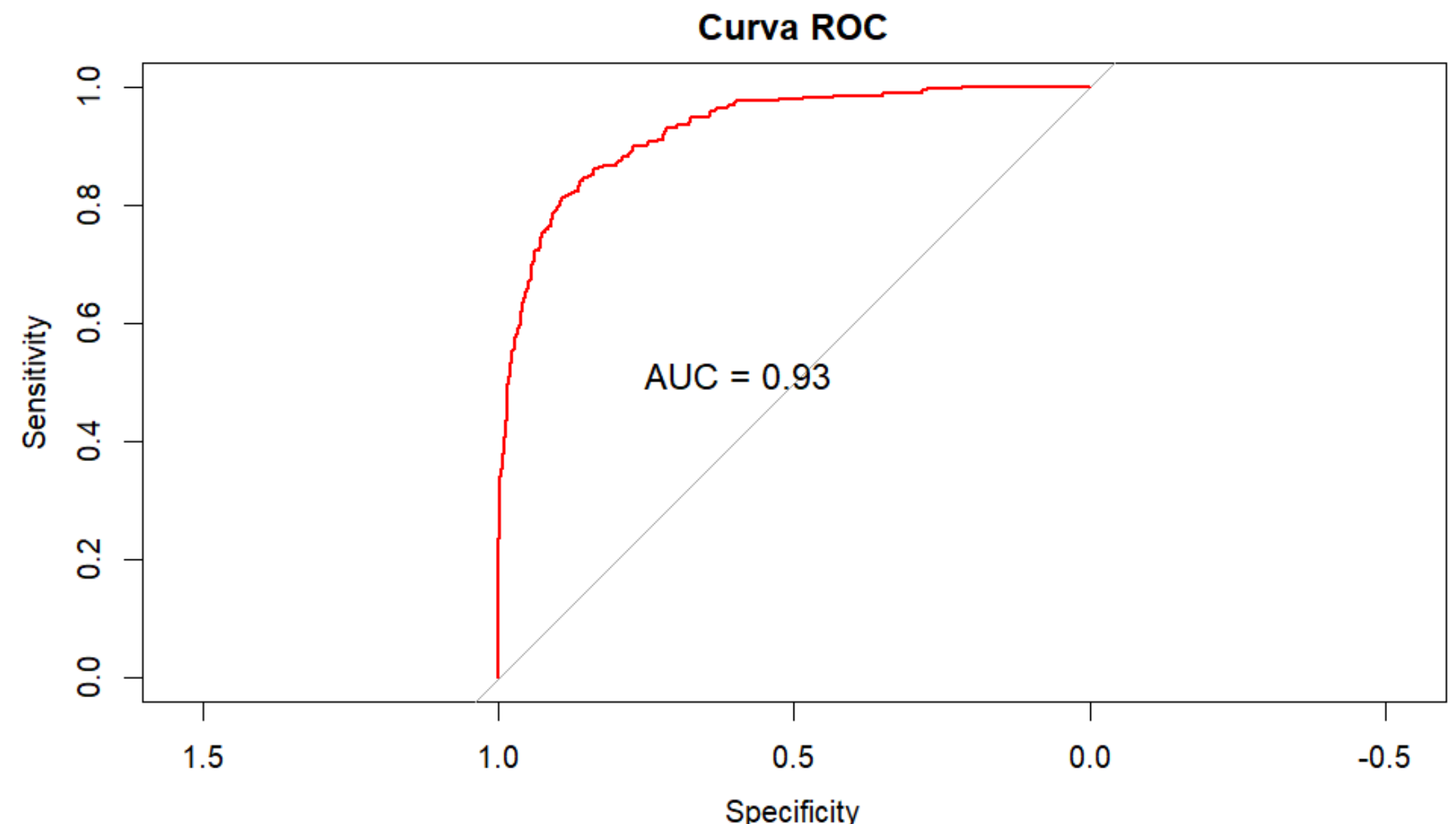
- CUSTOMER AGE
- EDUCATION LEVEL
- MONTHS ON BOOK
- AVERAGE OPEN TO BUY
- AVERAGE UTILIZATION RATIO

MODEL PERFORMANCE

AVERAGE ACCURACY AND AUC

THE MODEL SHOWCASED AN AVERAGE ACCURACY OF **90.42%**, INDICATING ITS ROBUST PERFORMANCE IN PREDICTING CUSTOMER CHURN. ADDITIONALLY, IT ACHIEVED AN IMPRESSIVE AUC OF **93%**, HIGHLIGHTING ITS CAPABILITY TO DISCRIMINATE BETWEEN CHURNED AND NON-CHURNED CUSTOMERS EFFECTIVELY

ROC CURVE



4 – FINDINGS

FINDINGS

1

INCOME CATEGORY

Customers with higher incomes, such as those in the \$80K - \$120K and \$120K + income categories, are less likely to churn from the bank's services compared to those in lower income categories.

2

NUMBER OF DEPENDENT PEOPLE PER CLIENT

Customers with a higher number of economic dependents are less likely to churn from the bank's services. This could indicate that they have more financial responsibilities and greater economic stability.

3

CREDIT CARD CATEGORY

Customers with Gold and Platinum cards are less likely to churn from the bank's services compared to those with Blue and Silver cards. Customers with higher category cards are more committed to the bank and may be more satisfied with the benefits and services associated with those cards.

4

TOTAL RELATIONSHIP COUNT AND TOTAL TRANSACTIONS

Customers with more relationships with the bank and a higher transaction volume are less likely to churn from the bank's services. This could suggest that they are more engaged with the financial institution and actively leverage the services offered.

5

CONTACT WITH THE BANK

Customers who have more contact with the bank are less likely to churn from the bank's services. This may indicate that regular interaction with the bank strengthens the customer-bank relationship and can increase retention.

5 – RECOMMENDATIONS

REC OM MEN DATI ONS

1

INCOME CATEGORY

Direct retention strategies towards lower-income customers, offering financial products with more flexible fees and requirements, as well as personalized financial advice to help them manage their finances more effectively.

2

NUMBER OF DEPENDENT PEOPLE PER CLIENT

offering banking services tailored to the needs of families and providing financial products options that facilitate family resource management.

3

CREDIT CARD CATEGORY

Offering additional incentives or exclusive benefits for lower category cardholders to increase their loyalty.

4

TOTAL RELATIONSHIP COUNT AND TOTAL TRANSACTIONS

Promote the adoption of additional services, such as savings accounts, investments, or insurance, and offer incentives to increase transaction activity.

5

CONTACT WITH THE BANK

Implement strategies to encourage greater interaction, such as proactive communication campaigns, enhanced customer service, and loyalty programs.

THANK YOU!

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