Problem Statement-

We have customer data

We are trying to predict whether or not give a loan

Banking Domain knowledge

Asset = Loan Product[Asset is something that gives bank profit]

when any customer are tacking loan from bank then we have to give some interest to bank

Housing Loan

Personal Loan

Home Loan

Business Loan

Education Loan[eg.taken 200000 loan and given 200000+interest]

Credit Card -- Asset

Liability = [Liability is something that gives bank loss] bank owes to user

liability is a financial obligation the bank owes to another entity, such as customer deposits, borrowed funds, or other debts. For most banks, customer deposits (like checking, savings, and certificate of deposit accounts) represent their largest liability because the bank is obligated to return this money to its customers.

[CASA]

Current Account [CASA] current Account Saving Account

Saving Account

[Term Deposit]

Fixed Deposit

Reccurent Deposit

jo bhi bank ke liye asset hota woh customer ke liye Liability hota hai aur jo customer ke liye asset hota hai bank ke liye Liability hota hai.

NPA --[Non Performing Asset]

[it helps us to check the quality of bank,portfolio]

NPA = Loan that is defaulted

1. Disbursed Amount == Loan Amount given to a customer

2. OSP == Out standing Principle

1 Lakh Loan

8000 EMI\*5

40000 Pay

OSP

60000 bakaya = Balance+OSP

OSP Should Be zero at the end of loan cycle

Amortization

3. DPD == Days Past Due

if any payment get delay of 2 days then DPD will be 2 days

DPD = 2

DPD ideally zero

when DPD becomes >0 then customer consider as Defaulter

4. PAR == Portfolio at Risk

OSP when DPD>0

5. NPA

Loan Account when DPD>90 then it will become NPA account

Credit Risk Types in Banking

DPD (Zero): NDA (Non delinquint account) = no default account = Timly pay EMI

DPD (0 to 30): SMA1 (Standard Monitoring Account)

DPD (31 to 60): SMA2

DPD (61 to 90): SMA3

DPD (91 to 180): NPA

DPD (>180) : Written-off (Loan which is not present)

NPA improve = Loan Portfolio quality of the bank will be better = Market sentiment will be good = Stock price will imporoved.

---------------NPA having 2 Part---------------

types

GNPA = Gross Non Performing Asset(3-5 %) = OSP Default

NNPA = Net Non Performing Asset (0.01 to 0.06 %)= Provisioning Amount subtracted

Bank quality assess, GNPA Value detailed explanation about that

Hypothesis Testing

Inferential statistics

# Are these two associated - MARITALSTATUS VS Approved\_Flag?

step 1.

H0 : null hypothesis (by default always true), so we are considering that this is not associated [MARITALSTATUS VS Approved\_Flag]

Not Associated

step 2.

H1 : alternate hypothesis

Associated

-- Jo hum prove karna chahte hai woh hum alternate hypothesis me dalenge aur uska ulta hum null hypothesis me dalenge.

step 3.

Alpha (Assumed)

Significane level

Strictness level

5% = 0.05

Less risky projects =High alpha

More risky projects =Less alpha

Step 4.

Confidence interval

CI= 1- alpha

step 5.

Calculate the evidence against H0

p-value

p-value is calculated using tests T-test, ChiSquare, Anova

Degree of freedom

step 6.

p\_value<= alpha:

reject H0(reject null hypothesis)

p\_value> alpha:

fail to reject H0(fail to reject null hypothesis)

make assumption of court to prove guilty if persion is commited crime but lake of evidence court will say court was not able to prove the crime.

Chisquare Test = Cat vs Cat

T-Test =Cat vs Num (2 categories)

ANOVA = Cat vs Num (>=3 categories)