SUMMER INTERNSHIP PROJECT-1 REPORT

Name: Anu Namala

Gmail ID: anunamala04@gmail.com

Studying At: Rajiv Gandhi University of Knowledge Technologies

Intern ID: EI0486

Project: Credit Card Customer Acquisition Model

Sanity Checks – Data Cleaning

→ Provide meaningful treatment to all values where the age is less than 18.

Complete meaningful treatment is given to customers whose age is less than 18 by removing the values where the age is less than 10 and replacing the values of age less than 18 with their mean values (since the replacing of the numerical values with their mean values is always preferable)

→Identify where monthly spending is more than the limit and then impose a 2% penalty of the credit limit.

A penalty of 2% is imposed on the customers whose expenditure is more than the limit

As follows:

• Spend and the Customer Acquisition data sets are merged to find out the users whose

Spend is greater than the limit for a month

• A new data set is created with the above values to impose penalties to the users

→ Identity where the repayment is more than spend then give them a credit of 2% of their credit limit in the next month's billing.

To do this Firstly add the repayment amount to the spend data or vice versa and then compare the spend and repayment and then impose the credit to the customers according to the given condition

Tasks:

Monthly spend of each customer

The monthly spend of each customer was retrieved by grouping them based on the month.

Monthly repayment of each customer

Monthly Repayments of the each and every customer was retrieved by grouping them based on the month.

Highest paying 10 customers

To get the highest paying 10 customers here I used

Repayment.nlargest(10,["Amount"]) where nlargest gives the n highest values in the given data set.

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People in which segment are spending more money

Most Spending Segment: Normal Salary

Group the data by segment and calculate the total spending for each segment then sort the segments by spending in descending order and return the first value.

Which age group is spending more money?

The age group with the highest spending: 49

Group the data by age group and calculate the total spending for each group then find the age group with the highest total spending using the idxmax() function.

Which is the most profitable segment?

The highest profitable segment is the segment where spending is less and the repayment is more so we want to find out the max of both and check where the condition meets and that would be the most profitable segment.

According to this Highest Profitable Segment is Normal Salary.

In which category the customers are spending more money?

Find out the sum of the amount based on the type of the category using groupby() and sum() functions then return the category with the highest total amount using the idxmax() function.

Monthly profit for the bank.

The bank's profit is calculated from the difference of monthly repayments and spending and it will give the bank's profit month-wise.

Impose an interest rate of 2.9% for each customer for any due amount

The due amount is calculated by subtracting spending and repayments and according to the due amount an interest of 2.9% is imposed for the customers and update the due amount by adding the interest amount

Thank You.