Project Name – Credit Card Segmentation

Deadline - 15 Days

Problem Statement -

This case requires trainees to develop a customer segmentation to define marketing strategy. The sample dataset summarizes the usage behaviour of about 9000 active credit card holders during the last 6 months. The file is at a customer level with 18 behavioural variables.

Expectations from the student:

1. Advanced data preparation. Build an 'enriched' customer profile by deriving 'intelligent' KPI's such as monthly average purchase and cash advance amount, purchases by type (one-off, instalments), average amount per purchase and cash advance transaction, limit usage (balance to credit limit ratio), payments to minimum payments ratio etc.
2. Advanced reporting. Use the derived KPI's to gain insight on the customer profiles.
3. Clustering. Apply a data reduction technique factor analysis for variable reduction technique and a clustering algorithm to reveal the behavioural segments of credit card holders

Data Set :

1) credit-card-data.csv

Number of attributes:

- CUST_ID Credit card holder ID
- BALANCE Monthly average balance (based on daily balance averages)
- BALANCE_FREQUENCY Ratio of last 12 months with balance
- PURCHASES Total purchase amount spent during last 12 months
- ONEOFF_PURCHASES Total amount of one-off purchases
- INSTALLMENTS_PURCHASES Total amount of installment purchases

- CASH_ADVANCE Total cash-advance amount
- PURCHASES_ FREQUENCY-Frequency of purchases (percentage of months with at least on purchase)
- ONEOFF_PURCHASES_FREQUENCY Frequency of one-off-purchases
- PURCHASES_INSTALLMENTS_FREQUENCY Frequency of installment purchases
- CASH_ADVANCE_ FREQUENCY Cash-Advance frequency
- AVERAGE_PURCHASE_TRX Average amount per purchase transaction
- CASH_ADVANCE_TRX Average amount per cash-advance transaction
- PURCHASES_TRX Average amount per purchase transaction
- CREDIT_LIMIT Credit limit
- PAYMENTS-Total payments (due amount paid by the customer to decrease their statement balance) in the period
- MINIMUM_PAYMENTS Total minimum payments due in the period.
- PRC_FULL_PAYMENT- Percentage of months with full payment of the due statement balance
- TENURE Number of months as a customer

Evaluation Basis

The project will be evaluated on the following basis:

1. The process of building the model should move from simple to complex. This means its mandatory to implement multiple linear regression and logistic regression before approaching any advance level algorithm such as Random forest etc.

2. Every model should be supported by reason of acceptance or rejection. Special emphasis on the reasons why the student has picked/dropped an algorithm.

3. The student should mention which error metric is used and why. For example, if RMSE used in place of MAPE, the reason should be clearly mentioned by the student that why a particular error metric is used. Special emphasis on goodness of fit such as AIC and confusion metrics.

4. The student should revise the concepts before starting the project work.

5. The student should be confident enough to explain every concept that is written in the project report.

6. The questions during the mock sessions would not limit to project. Any topic that is covered in the syllabus can be asked during the mock session.

7. If student unable to explain the project report or during the session, it appears that student has copied the solution then zero marks will be given to the student.

8. The code should be written keeping in mind the code file can be run from DOS prompt.

9. The instructions to run the code file should be submitted with the project report.

Deliverables from Candidate

1. Code written in both R and Python.
2. Comprehensive Project Report with Data Visualization for explaining Features and its importance.
3. Instruction to deploy and run code.
4. Summarize the Understanding of How this project can help the business in achieving the strategic goals.

Always remember these evaluation basis, deliverables, and your deadline. And your aim is to meet the deadline.

Warning - Do not submit incomplete projects or projects that are not running. They will result in a negative skill score. Also, you are not allowed to seek help from a discussion board or any individual at all. Taking such help will be considered plagiarism and will violate the terms and conditions associated with project stage on edwisor.com .