Datanest

Business Cases

Machine Learning on Marketing

Part I

1. Customer Churn
2. Direct Marketing
3. Customer Segmentation
4. Product Bundling
5. Measure Customers Feedback (Sentiment)

Customer Churn

Business Case #1

Step 1

Business Problem Statement

How to **predict customer that more likely to churn** so **we can prioritize our retention efforts**?

Step 2

Define Data - *Unit Analysis*

Customer

Step 3

Define Data - *Variable*

Customer ID, Recency, Frequency and Monetary

Step 4

Define Data - *Label*

Customer Churn

Step 5

Action

retention team can focus their resources on the customers most at risk and offer them incentives to remain loyal

Step 6

Success Criteria

Minimize customer that defect to the competitor

Step 7

Threshold

Below certain customer churn value

Direct Marketing

Business Case #2

Step 1

Business Problem Statement

How to c**hoose the right prospects** so the **cost can be optimized to convert prospects into customers**?

Step 2

Define Data - *Unit Analysis*

Prospects

Step 3

Define Data - *Variable*

Prospects ID, Prospect Profile (Age, Gender, Location, Job etc), External data (Income per capita, Weather)

Step 4

Define Data - *Label*

Buy or not buy

Step 5

Action

Offering marketing material

Step 6

Success Criteria

Customer purchase rate improved

Step 7

Threshold

Probability to purchase on certain percent

Customer Segmentation

Business Case #9

Step 1

Business Problem Statement

What is the **characteristics** of our **customer** ?

Step 2

Define Data - *Unit Analysis*

Customer ID

Step 3

Define Data - *Variable*

Frequency, Recency, Monetary

Step 4

Define Data - *Label*

No-label (Unsupervised)

Step 5

Action

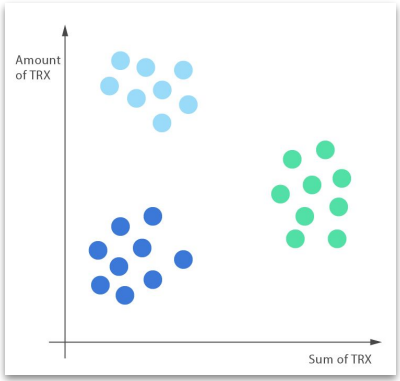
To subset customer for better promotion targeting

Step 6

Success Criteria

Get interpretable customer archetype

Expected Output :



Product Bundling

Business Case #4

Step 1

Business Problem Statement

What kind of **product** that Customer might to **buy** ?

Step 2

Define Data - *Unit Analysis*

Ascendant-Descendant pair

Step 3

Define Data - *Variable*

Product pair, Order ID, Frequency

Step 4

Define Data - *Label*

No-label (Unsupervised)

Step 5

Action

Offer Product Recommendation to Customer if lift score below certain number

Step 6

Success Criteria

Customer buy the offered product

Step 7

Threshold

Lift score below certain number

Rule	Support	Confidence	Lift
A	3/4	-	-
B	2/4	-	-
A→B	1/4	1/3	2/3
B→A	1/4	1/2	2/3

Measure Customers Feedback (Sentiment Analysis)

Business Case #5

Step 1

Business Problem Statement

How to **measure customers feedback**?

Step 2

Define Data - *Unit Analysis*

Comment

Step 3

Define Data - *Variable*

Restaurant, Customer Profile (ID, Sex, Age, Country) Customer Origin (Local, Abroad, Both), Date, Comment

Step 4

Define Data - *Label*

Customer Feedback Score (Positive, Netral, Negative)

Step 5

Action

If restaurant rating or customer feedback score goes below certain number, send notification

Step 6

Success Criteria

Improve restaurant reputation and sales

Step 7

Threshold

Highest Sentiment Score