**Case Study for CRM Analytics**

**Part I: Magic Number**

**Background:**

The CRM team wants to improve the timing of campaigns in the early stages of the customer lifecycle. One hypothesis the team came up with is that there is likely a minimum number of orders a new customer needs to place to build a habit and thus have a low likelihood of churning.

**Objective:**

Imagine you have access to all relevant data (orders, CRM campaigns, incentive usage etc. for all markets). Please describe how you would approach this problem.

**Part II: Voucher Optimization**

**Objective:**

Help the CRM team to define the best voucher to use for each customer in one example market. Please answer:

* What is the best voucher overall?
* What is the best single dimensions segmentation to be used?
* How would you train an ML model to assign the optimal voucher on a customer level? (Outlining the approach including considerations and assumptions is enough--No coding required.)

**Background:**

The CRM team ran a test where they sent vouchers to churning customers and also selected a control-group which met the same selection-criteria. In total there are 9 different combinations of vouchers and MOV.

In order to choose the best voucher, the team might want to optimize for growth ("orders" in the data set) or profit ("margin" in the data set).

**Data description:**

In order to segment customers, the following dimensions can be used: ● Segment\_frequency\_rest

* 1. Segmentation of customers base on their order frequency in the last 6 months ○ Values:

|  |  |
| --- | --- |
| Value | Meaning |
| N | First order in last 4 weeks |
| M | First order in last 8 weeks |
| E | Single order in last 6 Month |
| F | No order in last 6 Month |
| A | Highest 25% |
| B | Upper mid 25% |
| C | Lower mid 25% |
| D | Lowest 25% |

* Segment\_monetary\_rest
  1. Segmentation of customers based on total spend (basket)

○ Values: L, M. H (low, medium, high) ● Segment\_discount\_dh\_rest

○ Segmentation of customers based on average discount per order (voucher value)

○ Values: N, M. H (none, medium, high)

* Segment\_variety\_rest
  1. Segmentation based on number of different restaurants the customer purchased ○ Values:

■ N: always orders at same restaurant so 100%.

■ L: not variety seeker, so >50% orders at same restaurant.

■ M: <=50% orders at same 1 restaurant, but >75% orders with the same 3 or less restaurants.

■ H: <=50% orders at same 1 restaurant and <=75% orders with the same 3 or less restaurants.

* Segment\_basket\_rest
  1. Number of different basket-size categories the customer ordered

○ Values: 1,2,3 (1 would indicate all orders of the customer where placed in the same category, 3 would indicate that the customer has ordered in all categories)

● Lt\_order\_cluster

○ Number of orders the customer has placed

○ Values: 1, 2-4, 5+ ● Recency\_cluster

○ Days since last order of customer

○ Values: 30-60,60-90,90-120,120-180

* Lt\_cluster
  1. Days since first order of customer

○ Values: <180, 180-360, 360-720, 720+ ● Times\_in\_churn\_segments

○ Number of times the customer has had a recency of higher then 30 Days

○ Values

1, 2-4,5 (“1” would mean, that the customer is the first time in churn, “2-4” would mean that the customer already returned from churn before and then churned again)

* Preferred\_order\_period\_all\_verts
  1. Segmentation about order behaviour in time. Values indicate if the customer always ordered at the same or different weekdays and if he ordered at the same or different times of the day (breakfast, lunch, dinner)
* Returning\_probability\_segments

○ Predicted probability that the customer will place min. one order within the next 6 months

The treatment each customer is exposed to is stored in the column: “Voucher\_group”. The Value “Control Group” here means that the customer did not receive a voucher. If the customer received a voucher it follows this naming convention:” “voucher\_title|Voucher\_Value|MOV” (eg.

“lv-3|100|750” here means that the customer received a 100$ Voucher but has to spend at least 700€ in order to redeem it)

**Expected Output:**

* Code that is needed to run the analysis => please share this together with your solution for the sql - test with delivery hero min. 24 hours before the presentation
* 1 File that is easily consumed and understood by Stakeholders (Spreadsheet (G-Doc, Excel),

Presentation, PDF) ⇒ this is what you will present to the team