

## Loyalty driven customer segmentation

### Client: Mid-sized Euro Retail firm

#### Business Background

The client is one of the prominent retail companies with presence across Europe. Their once largest market share of ~40% in a particular demography has now reduced to ~10% - 11%. In a bid to recapture the market majority, they were implementing several new acquisition and upsell strategies. One of these upsell strategies included finding the repeat customers, and providing them with a loyalty card.

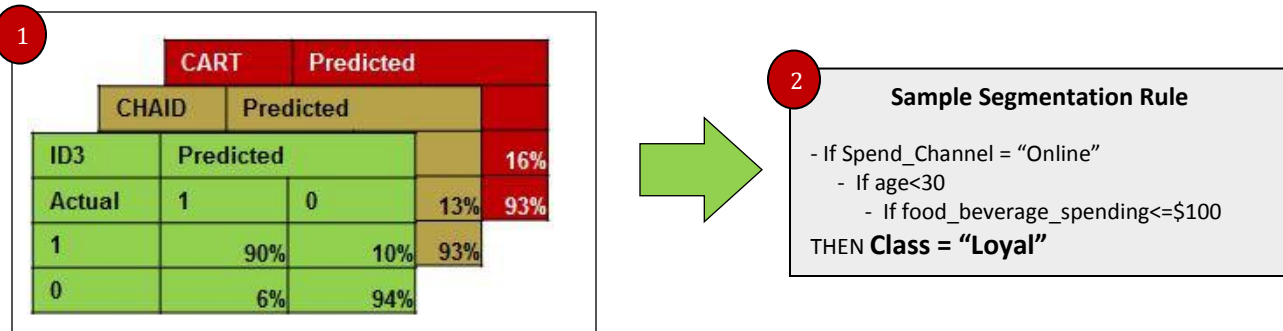
#### Problem Statement

In order to meet revenue goals, targeting the right customers with the right upsell offers was imperative. The need was to devise a strategy which will help the enterprise classify loyal and non-loyal customers based on their usage attributes.

#### Analytical Approach

1. We looked into several aspects of the data to find the variables best suited to define the company's engagement with the customer. We accounted for spending amount, days since his last visit to the shop, his spending pattern e.g. whether he is a sporadic customer or a customer who visits the shop once in a month with spending in a particular range or a frequent customer, his age, and various other factors.
2. Created a segmentation rule based strategy after comparing misclassification performances across several Decision tree methods in R. The model was validated against samples taken from different time-spans, and it displayed fairly stable behavior with lower percentage of misclassification in each validation sample.

#### Results and Recommendations



1. Comparison of confusion matrix generated through various decision tree algorithms, 2. Sample rule for labeling a customer as a repeater (Class=1)

1. The model managed to correctly classify about 82% repeaters through the implementation phase. Misclassification was further reduced by 3% by pruning the decision tree to optimum depth.
2. As a part of our data driven advisory recommendation practice, it was suggested looking at the customer profiles that up sell could be further enhanced by incentivizing sales of the most frequently moving products. The existing rewards programs were also advised to be revamped.