RFM Model

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Contents

Measuring the value of a customer within a RFM framework

Step1: Measure recency, frequency and monetary value

```
rfm <- dataTrans[, list(Freq = .N, monetary = mean(PurchAmount), recency = as.numeric(min(maxDate - Tra
head(rfm)
```

```
##    Customer Freq  monetary recency
## 1:   149332    3  91.61667    2257
## 2:   172951    4 222.45000    1411
## 3:   120621    1  99.95000    1878
## 4:   149236    2  59.95000    2007
## 5:   140729    6  67.11667     225
## 6:   180970    2  73.95000    1269
```

```
str(rfm)
```

```
## Classes 'data.table' and 'data.frame':   98660 obs. of  4 variables:
##  $ Customer: int  149332 172951 120621 149236 140729 180970 182927 103952 105474 103744 ...
##  $ Freq    : int  3 4 1 2 6 2 7 8 9 18 ...
##  $ monetary: num  91.6 222.4 100 60 67.1 ...
##  $ recency : num  2257 1411 1878 2007 225 ...
##  - attr(*, ".internal.selfref")=<externalptr>
```

Step2: Set a score to rank customers in recency, frequency and monetary

```
rfm_scores <- rfm[, list(Customer, recencyScore = as.numeric(cut2(-recency,g = 3)),
                         freqScore = as.numeric(cut2(Freq,g = 3)),
                         monetaryScore = as.numeric(cut2(monetary,g = 3)))]
head(rfm_scores)
```

```
##    Customer recencyScore freqScore monetaryScore
## 1:   149332            1         3             3
## 2:   172951            2         3             3
## 3:   120621            1         1             3
## 4:   149236            1         2             2
## 5:   140729            3         3             2
## 6:   180970            2         2             2
```

Step3: Calculate the overall score

```
unweighted <- rfm_scores[, list(Customer, Score = rowMeans(rfm_scores[, list(recencyScore, freqScore, m
head(unweighted)
```

```
##    Customer    Score
## 1:   149332 2.333333
## 2:   172951 2.666667
## 3:   120621 1.666667
## 4:   149236 1.666667
## 5:   140729 2.666667
## 6:   180970 2.000000
```

Step4: Analyze RFM group differences

```
unweighted[, Rounded := round(Score), by=Customer]
head(unweighted)
```

```
##    Customer    Score Rounded
## 1:   149332 2.333333       2
## 2:   172951 2.666667       3
## 3:   120621 1.666667       2
## 4:   149236 1.666667       2
## 5:   140729 2.666667       3
## 6:   180970 2.000000       2
```