

Logistic Regression Model for Brand Perception of a leading snack manufacturer

After Analyzing the data sets and our client requirement we find that

Independent Variables:

Brand A chips: Are made with farm grown ingredients like potato, corn or wheat?

Brand A chips: Have zero grams trans fat

Brand A chips: Are made with natural oils

Brand A chips : 10=minimally Processed / 1=Heavily processed on a 10 point scale

Dependent variable:

Brand A chips : Rate the following 10=good for you, 1=bad for you

It has 10 levels from 1 to 10,I assumed greater than 5 are good and less than that are bad, and created another categorical variable called target with 0 and 1,where 0 is bad and 1 is good.

Insights:

From the model we can infer that except from the processing level all other have -ve impact

Farm grown ingredients has a -ve impact of on the Brand value

Have zero grams trans fat has -ve impact of on the brand value

Are made with natural oils has -ve impact on the brand value

Processing level has a positive impact on the brand value

Confusion matrix

For validating the model, checked the accuracy and optimized it using the confusion matrix.

```
formula: {test$result<-ifelse(pred>0.39,1,0)
confusionMatrix(test$result,test$target,positive
="1")}
```

Accuracy is coming to be 76.89%,which seems to be fine.

Confusion Matrix and Statistics

	Reference	
Prediction	0	1
0	4694	988
1	684	869

Accuracy : 0.768