Restaurant Review Analysis

LIL

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## Restaurant User Review Analysis

## Natural Language Processing

This report is about the analysis of Restaurant review received by a user after availing the service.

For Model building we have 1000 review sample data which is classified into Positive and Negative reviews in the dataset.

Out of this 1000 reviews using 800 reviews we have build a model. This model will help us to classify the unidentified review into positive or negative.

To check the accuracy of the model we have kept 200 reviews aside on which we can run this pre-build model.

The result of those 200 test reviews is as follow:

## y\_pred  
## Pred\_Neg Pred\_Pos  
## Actual\_Neg 82 18  
## Actual\_Pos 23 77

## [1] "Sensitivity of Model: 78 %"

## [1] "specificity of Model: 81 %"

## [1] "Accuracy of Model: 79 %"

## Terms used in NLP model

## Sensitivity:

It measures the proportion of actual positives that are correctly identified as such (e.g., the percentage of positive review which are correctly identified as positive).

## Specificity:

It measures the proportion of actual negatives that are correctly identified as such (e.g., the percentage of negative review which are correctly identified as negative).

## Accuracy:

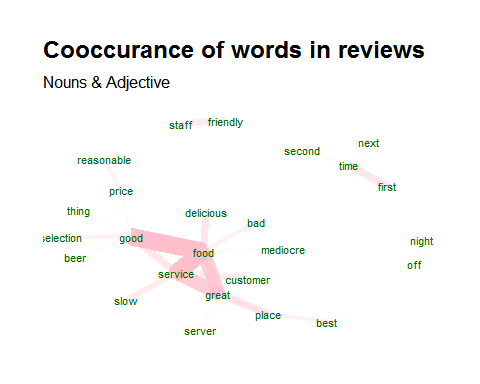
Accuracy is how close you are to the true value(e.g.,How correctly model classified positive and negative reviews).

## Graphical Presentation for Restaurant Review Analysis

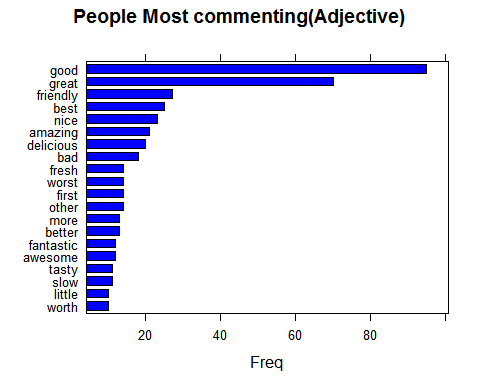
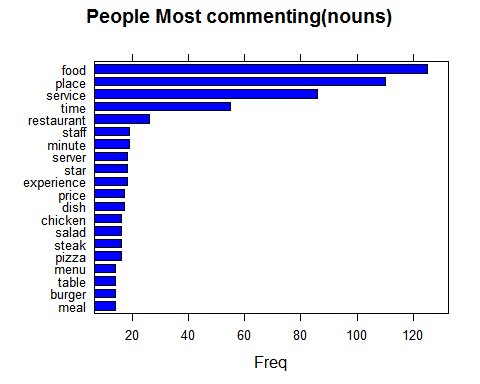
Most used words in Restaurant reviews :



## Cooccurance of words while talking about Restaurant

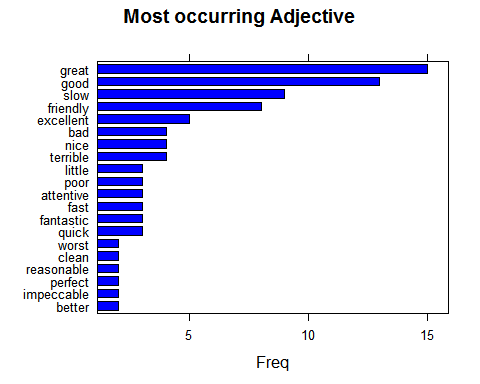
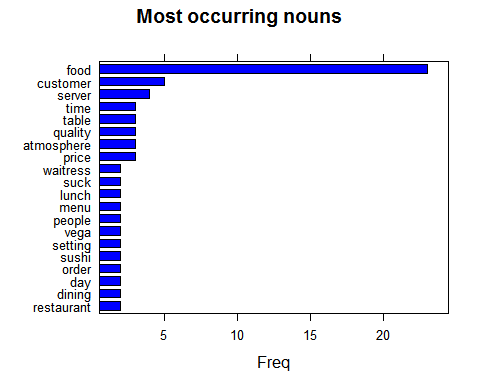


## Most Occurred Nouns and Adjective in Restaurant review



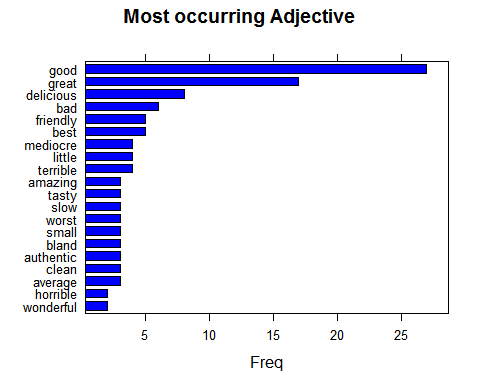
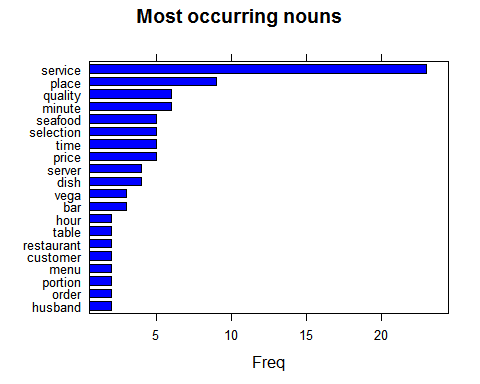
## Reviews commenting about Restaurant service

Analysis of the reviews while talking about the service



## Reviews about Restaurant Food Analysis

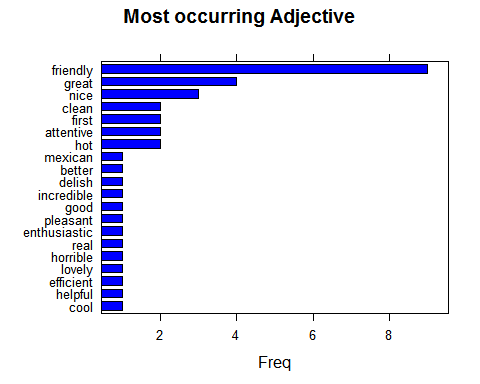
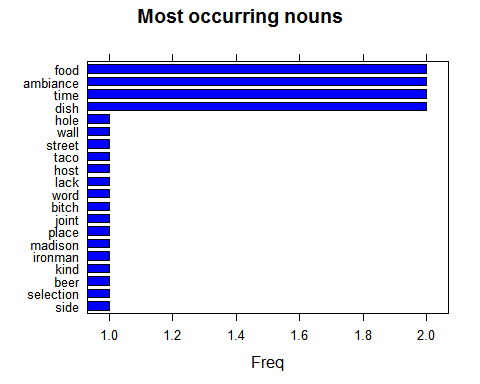
Analysis of reviews while talking about the Food



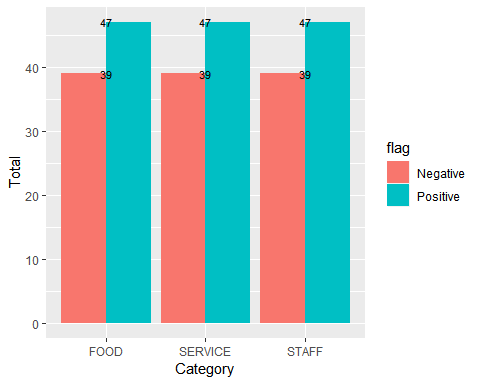
## Category flag Total  
## 1 SERVICE Positive 47  
## 2 SERVICE Negative 39  
## 3 FOOD Positive 47  
## 4 FOOD Negative 39

## Reviews commenting about Restaurant staff

Analysis of the reviews while talking about the staff



## Category flag Total  
## 1 SERVICE Positive 47  
## 2 SERVICE Negative 39  
## 3 FOOD Positive 47  
## 4 FOOD Negative 39  
## 5 STAFF Positive 47  
## 6 STAFF Negative 39



## Model Building Requirement

## Language/Tool Used :

R & Python

## Dataset Size :

Large data size will help to build good model with max. accuracy(More than 2000 reviews will give good picture in this case).