

EcommerceCustomers

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EcommerceCustomers

a) Data Analytic Question

The aim of this project is to to understand customer's behavior from a one year data set.

b) Success Metrics

- Successful Loading the data.
- Successful Handling missing data.
- Successful Outliers detection.
- Successful Outlier Visualization.
- Successful Handling outliers.
- Successful Univariate analysis.
- Successful Bivariate analysis.

c) Context

Kira Plastinina is a Russian brand that is sold through a defunct chain of retail stores in Russia, Ukraine, Kazakhstan, Belarus, China, Philippines, and Armenia. The brand's Sales and Marketing team would like to understand their customer's behavior from data that they have collected over the past year. More specifically, they would like to learn the characteristics of customer groups.

d) Data Understanding

Variables

- The dataset consists of 10 numerical and 8 categorical attributes.
- 'Revenue' attribute has been be used as a class label.
- "Administrative",
- "Administrative Duration"
- "Informational",
- "Informational Duration",
- "Product Related"
- and "Product Related Duration" represents the number of different types of pages visited by the visitor in that session and total time spent in each of these page categories.
- The "Bounce Rate", "Exit Rate" and "Page Value" features represent the metrics measured by "Google Analytics" for each page in the e-commerce site.

- The value of the “Exit Rate” feature for a specific web page is calculated as for all pageviews to the page, the percentage that was the last in the session.
- The “Page Value” feature represents the average value for a web page that a user visited before completing an e-commerce transaction.
- The “Special Day” feature indicates the closeness of the site visiting time to a specific special day
- The dataset also includes the operating system, browser, region, traffic type, visitor type as returning or new visitor, a Boolean value indicating whether the date of the visit is weekend, and month of the year.

e) Experimental Design

- Formulation of the research question.
- Data Sourcing
- Check the Data
- Perform Data Cleaning
- Perform Exploratory Data Analysis (Univariate, Bivariate & Multivariate)
- Implement the Solution
- Challenging the Solution
- Follow up Questions

Data Importation

```
Ecommerce_data<- read.csv("http://bit.ly/EcommerceCustomersDataset",header =T)
```

converting data.frame data into data.table

```
Ecommerce_data<-as.data.table(Ecommerce_data)
class(Ecommerce_data) #checking class
```

```
## [1] "data.table" "data.frame"
```

Data Columns

```
kable(colnames(Ecommerce_data))
```

x
Administrative
Administrative_Duration
Informational
Informational_Duration
ProductRelated
ProductRelated_Duration
BounceRates
ExitRates
PageValues
SpecialDay
Month
OperatingSystems
Browser
Region
TrafficType
VisitorType

x

Weekend

Revenue

Check for missing values

```
library(Amelia)
```

```
## Warning: package 'Amelia' was built under R version 4.0.5
```

```
## Loading required package: Rcpp
```

```
## ##
```

```
## ## Amelia II: Multiple Imputation
```

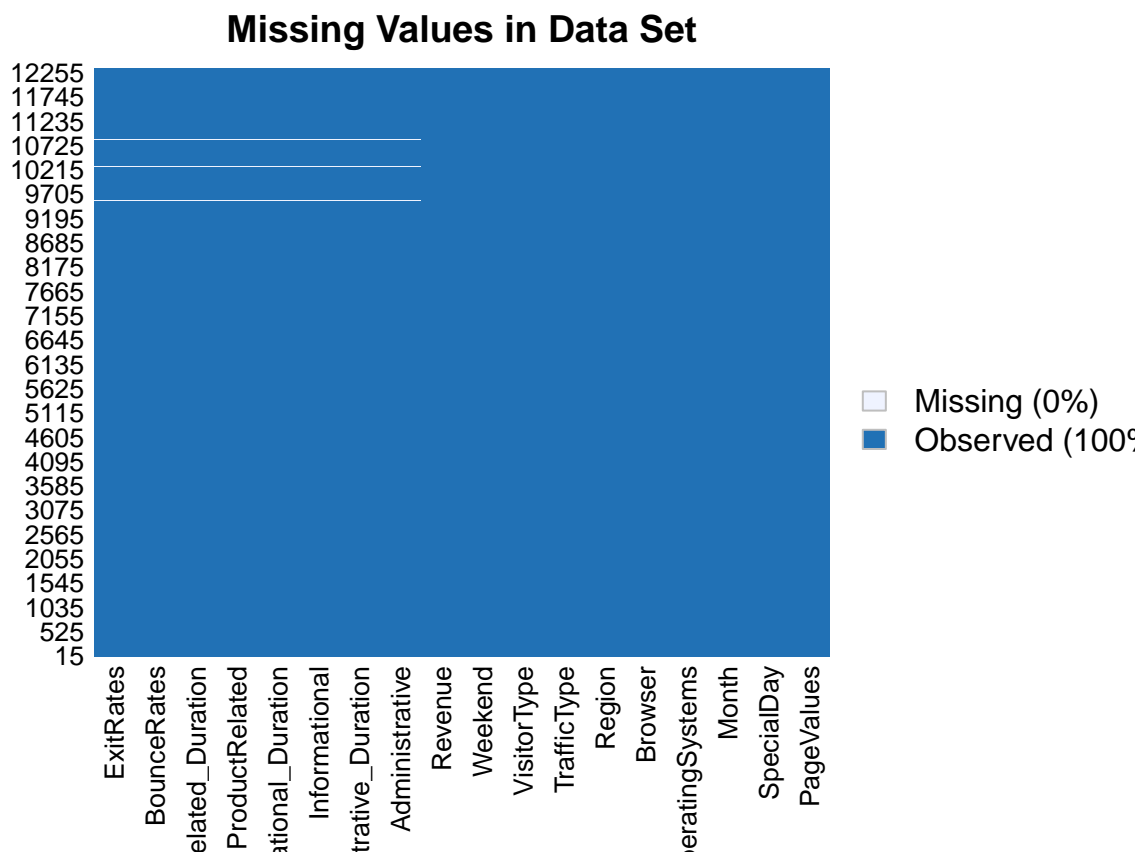
```
## ## (Version 1.7.6, built: 2019-11-24)
```

```
## ## Copyright (C) 2005-2021 James Honaker, Gary King and Matthew Blackwell
```

```
## ## Refer to http://gking.harvard.edu/amelia/ for more information
```

```
## ##
```

```
missmap(Ecommerce_data,main="Missing Values in Data Set")
```



any NAs in data set?

```
colSums(is.na(Ecommerce_data))
```

```
##
```

```
Administrative Administrative_Duration
```

```
Informational
```

```
##          14          14          14
## Informational_Duration ProductRelated ProductRelated_Duration
##          14          14          14
##          BounceRates          ExitRates          PageValues
##          14          14          0
##          SpecialDay          Month          OperatingSystems
##          0          0          0
##          Browser          Region          TrafficType
##          0          0          0
##          VisitorType          Weekend          Revenue
##          0          0          0
```

Now lets find the duplicated rows in the dataset df and assign to a variable duplicated_rows below.

```
duplicated_rows <- Ecommerce_data[duplicated(Ecommerce_data),]
#Lets print out the variable duplicated_rows and see these duplicated rows
kable(duplicated_rows)
```

Administrative	Administrative	Administrative	Administrative	Administrative	ProductRelated	BounceRates	ProductRelated	ProductRelated_Duration	SpecialDay	Month	OperatingSystems	Region	TrafficType	VisitorType	Weekend	Revenue
0	0	0	0	1	0	0.2	0.2	0	0.0	Feb	1	1	1	3	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Feb	3	2	3	3	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	1	1	1	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	4	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	3	2	3	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	1	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	1	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	1	1	Returning	FALSE
0	0	0	0	2	0	0.2	0.2	0	0.0	Mar	2	5	1	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	4	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	3	2	3	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	1	1	2	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	3	2	2	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	1	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	1	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	1	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	1	1	Returning	FALSE
NA	NA	NA	NA	NA	NA	NA	NA	0	0.0	Mar	2	2	1	2	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	3	2	1	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	4	1	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	3	2	3	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	1	1	1	3	Returning	FALSE
0	0	0	0	2	0	0.2	0.2	0	0.0	Mar	2	2	1	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	1	1	3	3	Returning	FALSE
0	0	0	0	2	0	0.2	0.2	0	0.0	Mar	1	1	1	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	1	1	8	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	1	1	4	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	1	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	1	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	3	2	3	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	1	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	1	1	1	3	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	1	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	7	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	2	1	Returning	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	3	2	1	1	Returning	FALSE

Administrative	Investigative	Law Enforcement	Information	Financial	Professional	Protective	Public	Blatant	ED	Patrol	Special	Motor	Operational	Bus	System	Traffic	Visitor	Type	Redeem
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	1	1	8	1	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	1	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	1	1	1	9	Returning	TRUE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	3	2	1	1	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	1	1	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	2	1	1	Returning	FALSE	FALSE	FALSE	FALSE
NA	NA	NA	NA	NA	NA	NA	NA	0	0.0	Mar	2	2	1	2	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	3	2	3	1	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Mar	2	4	1	1	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	1	1	4	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	1	1	1	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	2	2	1	1	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	2	4	1	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	1	1	3	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	1	1	1	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	2	2	1	4	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	2	2	4	1	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	1	1	1	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	1	1	4	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	2	2	7	4	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	1	1	4	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	1	1	1	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	2	2	2	1	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	3	2	1	13	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	2	2	1	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	2	2	1	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	2	2	1	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	1	1	1	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	3	2	9	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	2	0	0.2	0.2	0	0.0	May	2	2	2	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	2	2	1	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	2	2	1	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.8	May	2	2	1	1	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	3	2	3	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	2	2	1	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	2	2	6	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	1	1	6	4	Returning	TRUE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	2	2	1	13	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	2	0	0.2	0.2	0	0.0	May	2	2	2	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.6	May	2	2	1	1	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	3	2	3	13	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	1	1	3	15	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	1	1	3	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	May	2	4	1	6	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	June	2	2	1	1	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	June	2	2	1	1	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	June	3	2	3	13	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Nov	3	2	3	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	3	2	3	1	Returning	TRUE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	2	2	1	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Nov	3	2	4	3	Returning	FALSE	FALSE	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	2	2	8	1	Returning	FALSE	FALSE	FALSE	FALSE

Administrative	Attainment	Latency	Information	Production	Production	Blended	ED	Pages	Special	MD	Operational	Employee	Region	Traffic	Visitor	Type	Revenue
0	0	0	0	1	0	0.2	0.2	0	0.0	Nov	2	2	1	1	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Nov	3	2	7	13	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	2	2	2	1	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	2	2	6	13	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	2	2	1	13	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	8	13	9	20	Other	FALSE	FALSE
0	0	0	0	2	0	0.2	0.2	0	0.0	Nov	1	1	1	1	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Nov	1	1	3	2	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Nov	2	2	3	1	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Nov	2	2	1	1	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	1	1	1	1	Returning	TRUE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Nov	1	1	4	1	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Nov	2	2	3	1	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Nov	2	4	3	3	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	3	2	6	1	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	8	13	9	20	Other	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Nov	3	2	1	13	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	2	2	1	13	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	8	13	9	20	Other	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Nov	3	2	1	1	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	1	1	1	1	Returning	TRUE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Nov	2	2	1	1	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Nov	1	1	3	3	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	1	1	4	1	Returning	TRUE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	2	2	1	1	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	2	2	1	1	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	1	1	1	2	New_Visitor	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	1	1	4	1	Returning	TRUE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	1	1	1	3	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	1	13	9	20	Returning	FALSE	FALSE
0	0	0	0	1	0	0.2	0.2	0	0.0	Dec	8	13	9	20	Other	FALSE	FALSE

Removing these duplicated rows in the data set or showing these unique items and assigning to a variable `unique_items` below

```
unique items <- Ecommerce data[!duplicated(Ecommerce data), ]
```

Encoding Categorical Variables

```
library(encode)
```

```
## Warning: package 'encode' was built under R version 4.0.5
```

##

```
## Attaching package: 'encode'
```

```
## The following object is masked from 'package:forcats':
```

##

```
##      as factor
```

```
Ecommerce data$Weekend<-as.factor(Ecommerce data$Weekend)
```

```
Ecommerce_data$Weekend<-unclass(Ecommerce_data$Weekend) # Convert categorical variables
```

```
Ecommerce_data$Revenue<-as.factor(Ecommerce_data$Revenue)
Ecommerce_data$Revenue<-unclass(Ecommerce_data$Revenue)

Ecommerce_data$VisitorType<-as.factor(Ecommerce_data$VisitorType)
Ecommerce_data$VisitorType<-unclass(Ecommerce_data$VisitorType)

Ecommerce_data$Month<-as.factor(Ecommerce_data$Month)
Ecommerce_data$Month<-unclass(Ecommerce_data$Month)
```

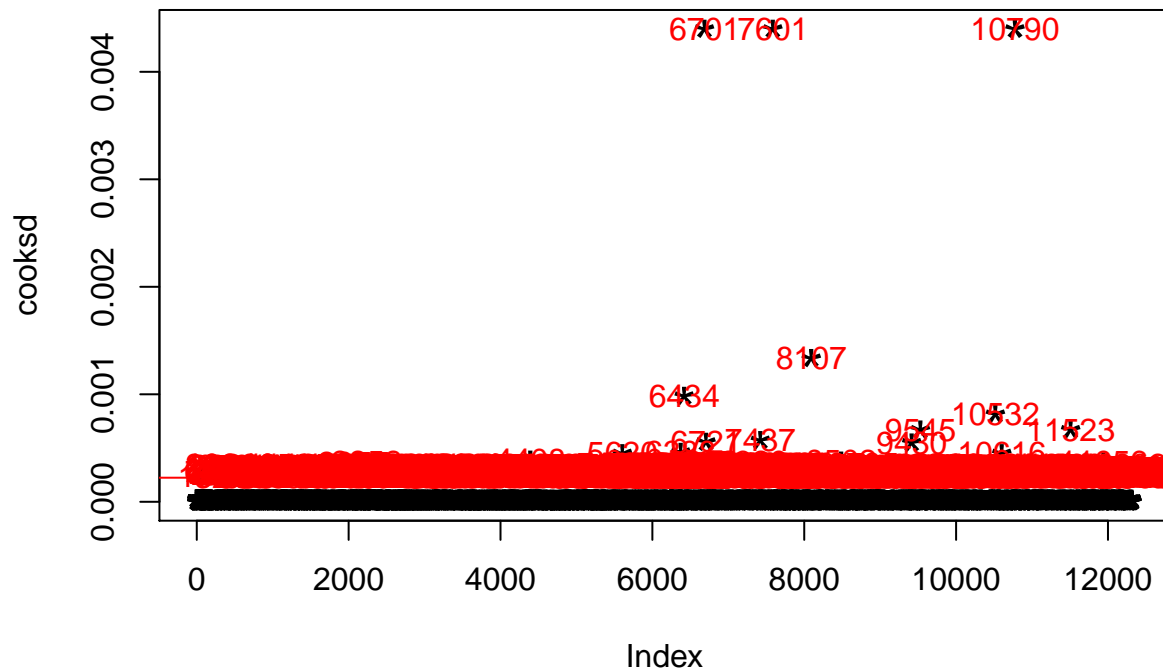
Outlier Treatment

```
mod <- lm( Revenue~ExitRates, data=Ecommerce_data)
cooks_d <- cooks.distance(mod)

#Influence measures
#In general use, those observations that have a cook's distance greater than 4 times
#the mean may be classified as Outlier

plot(cooks_d, pch="*", cex=2, main="Outliers by Cooks distance") # plot cook's distance
abline(h = 4*mean(cooks_d, na.rm=T), col="red") # add cutoff line
text(x=1:length(cooks_d)+1, y=cooks_d, labels=ifelse(cooks_d>4*mean(cooks_d, na.rm=T),names(cooks_d),""), col="red")
```

Outliers by Cooks distance



Tibbles

A tibble is a special kind of data.frame used by dplyr and other packages of the tidyverse. Tidyverse is a set of packages for data science that work in harmony because they share common data representations and API design. When a data.frame is turned into a tibble its class will change.

```
class(Ecommerce_data)

## [1] "data.table" "data.frame"

Ecommerce_data<- tbl_df(Ecommerce_data)

## Warning: `tbl_df()` is deprecated as of dplyr 1.0.0.
## Please use `tibble::as_tibble()` instead.
## This warning is displayed once every 8 hours.
## Call `lifecycle::last_warnings()` to see where this warning was generated.

class(Ecommerce_data)

## [1] "tbl_df"      "tbl"        "data.frame"
```

Data Overview

```
## Rows: 12,330
## Columns: 18
## $ Administrative      <int> 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0...
## $ Administrative_Duration <dbl> 0, 0, -1, 0, 0, 0, -1, -1, 0, 0, 0, 0, 0, 0...
## $ Informational       <int> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...
## $ Informational_Duration <dbl> 0, 0, -1, 0, 0, 0, -1, -1, 0, 0, 0, 0, 0, 0...
## $ ProductRelated      <int> 1, 2, 1, 2, 10, 19, 1, 1, 2, 3, 3, 16, 7, 6...
## $ ProductRelated_Duration <dbl> 0.000000000, 64.000000000, -1.000000000, 2....
## $ BounceRates         <dbl> 0.200000000, 0.000000000, 0.200000000, 0.05...
## $ ExitRates           <dbl> 0.200000000, 0.100000000, 0.200000000, 0.14...
## $ PageValues          <dbl> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...
## $ SpecialDay          <dbl> 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.4, 0.0, 0.8...
## $ Month               <int> 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3...
## $ OperatingSystems    <int> 1, 2, 4, 3, 3, 2, 2, 1, 2, 2, 1, 1, 1, 2, 3...
## $ Browser             <int> 1, 2, 1, 2, 3, 2, 4, 2, 2, 4, 1, 1, 1, 5, 2...
## $ Region              <int> 1, 1, 9, 2, 1, 1, 3, 1, 2, 1, 3, 4, 1, 1, 3...
## $ TrafficType         <int> 1, 2, 3, 4, 4, 3, 3, 5, 3, 2, 3, 3, 3, 3, 3...
## $ VisitorType         <int> 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3...
## $ Weekend             <int> 1, 1, 1, 1, 2, 1, 1, 2, 1, 1, 1, 1, 1, 1, 1...
## $ Revenue             <int> 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1...
```