Online Cryptography Advertisement Data Collection

```
#install.packages('tinytex')
```

```
#tinytex::install_tinytex()
```

Project Overview

A Kenyan entrepreneur has created an online cryptography course and would want to advertise it on her blog. She currently targets audiences originating from various countries. In the past, she ran ads to advertise a related course on the same blog and collected data in the process. She would now like to employ your services as a Data Science Consultant to help her identify which individuals are most likely to click on her ads.

Defining the Research Question Using the data available to us, identify individuals most likely to click on the entreprenuers adverstisements.

Defining our metric for Success We should be able to successfuly identify individuals most likely to click on the entrepreneurs

Experimental Design . Data Preparation . Data Cleaning . Descriptive Analysis . Uni variate visualizations . Multivariate visualizations . Recording our findings . Recommendations and Conclusions

#setting our working directory setwd("C://Users//Revolve//Documents//Basics Practice")

#confirming that our working directory has been set getwd()

a) Data Preparation

Loading and reading our dataset

```
data <- read.csv('advertising.csv')
```

Accessing Basic Information about our dataset

```
View(data)#shows the values of csv file in a table format
print(nrow(data))#shows number of rows
```

```
## [1] 1000
```

```
print(ncol(data))#shows number of columns
```

```
## [1] 10
```

```
print(colnames(data))#shows column names
```

```
##  [1] "Daily.Time.Spent.on.Site" "Age"
##  [3] "Area.Income"              "Daily.Internet.Usage"
##  [5] "Ad.Topic.Line"            "City"
##  [7] "Male"                     "Country"
##  [9] "Timestamp"                "Clicked.on.Ad"
```

```
print(str(data))#Returns column names with data types and factors
```

```
## 'data.frame':    1000 obs. of  10 variables:
##  $ Daily.Time.Spent.on.Site: num  69 80.2 69.5 74.2 68.4 ...
##  $ Age                     : int  35 31 26 29 35 23 33 48 30 20 ...
##  $ Area.Income             : num  61834 68442 59786 54806 73890 ...
##  $ Daily.Internet.Usage    : num  256 194 236 246 226 ...
##  $ Ad.Topic.Line           : chr  "Cloned 5thgeneration orchestration" "Monitored national standardi
##  $ City                    : chr  "Wrightburgh" "West Jodi" "Davidton" "West Terrifurt" ...
##  $ Male                    : int  0 1 0 1 0 1 0 1 1 1 ...
##  $ Country                 : chr  "Tunisia" "Nauru" "San Marino" "Italy" ...
##  $ Timestamp               : chr  "2016-03-27 00:53:11" "2016-04-04 01:39:02" "2016-03-13 20:35:42"
##  $ Clicked.on.Ad           : int  0 0 0 0 0 0 0 1 0 0 ...
## NULL
```

Our data set has 1000 rows and 10 columns. The dtypes are "int" and "chr". Some of our variables include Country, number of clicks, Gender(Male),City, Age, Daily Internet Usage e.t.c

b) Data Cleaning

We will import the following libraries to aid us in the data cleaning process

```
# Loading funModeling!
library(funModeling)
```

```
## Loading required package: Hmisc
```

```
## Loading required package: lattice
```

```
## Loading required package: survival
```

```
## Loading required package: Formula
```

```
## Loading required package: ggplot2
```

```
##
## Attaching package: 'Hmisc'
```

```
## The following objects are masked from 'package:base':
##
##     format.pval, units
```

```
## funModeling v.1.9.4 :)
## Examples and tutorials at livebook.datascienceheroes.com
##  / Now in Spanish: librovivodecienciadedatos.ai
```

```
library(dplyr)
```

```
##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:Hmisc':
##
##     src, summarize

## The following objects are masked from 'package:stats':
##
##     filter, lag

## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(tidyr)
library(ggplot2)
library(pander)
library(forcats)
```

We will profile our data set to find missing values, zeros, unique values and filter or remove where appropriate

```
df_status(data)#function can help us by showing these numbers in relative and percentage values. It als
```

```
##                    variable q_zeros p_zeros q_na p_na q_inf p_inf      type
## 1  Daily.Time.Spent.on.Site       0     0.0    0    0     0     0   numeric
## 2                       Age       0     0.0    0    0     0     0   integer
## 3             Area.Income       0     0.0    0    0     0     0   numeric
## 4     Daily.Internet.Usage       0     0.0    0    0     0     0   numeric
## 5            Ad.Topic.Line       0     0.0    0    0     0     0 character
## 6                     City       0     0.0    0    0     0     0 character
## 7                     Male     519    51.9    0    0     0     0   integer
## 8                  Country       0     0.0    0    0     0     0 character
## 9                Timestamp       0     0.0    0    0     0     0 character
## 10           Clicked.on.Ad     500    50.0    0    0     0     0   integer
##    unique
## 1     900
## 2      43
## 3    1000
## 4     966
## 5    1000
## 6     969
## 7       2
## 8     237
## 9    1000
## 10      2
```

```
sum(is.na(data))#confirming there are no Null values
```

```
## [1] 0
```

```
# checking for duplicates
duplicated_rows <- colSums(data[duplicated(data),])
duplicated_rows
```

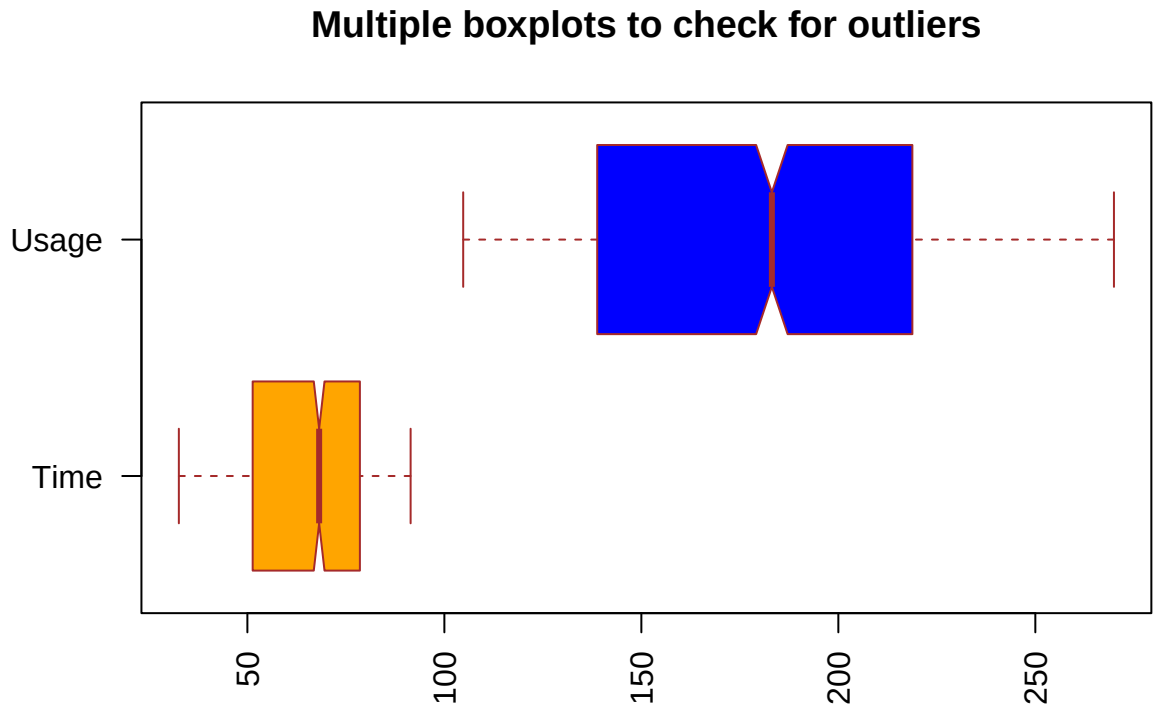
```
## Daily.Time.Spent.on.Site                     Age             Area.Income
##                        0                       0                       0
##     Daily.Internet.Usage          Ad.Topic.Line                    City
##                        0                       0                       0
##                     Male                 Country               Timestamp
##                        0                       0                       0
##            Clicked.on.Ad
##                        0
```

From the above we can deduce that there are two categorical variables as shown by their binary output(unique values: 2). Our dataset has no missing values and 50% amount of zeros in the Male and Clicked on Ad columns which happen to be our categorical variables

Finding Outliers We will proceed to check whether our data has any outstanding outliers using boxplots

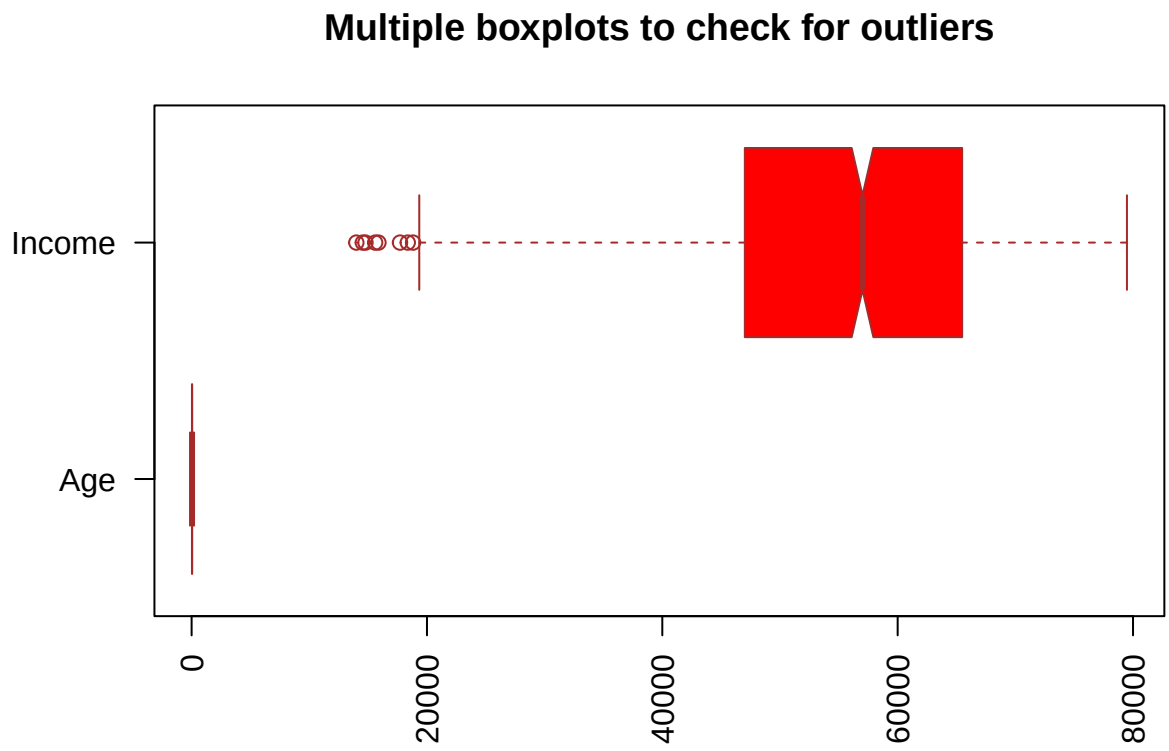
```
Age <- data$Age
Daily_Time_Spent_on_Site <- data$ Daily.Time.Spent.on.Site
Daily_Internet_Usage <- data$Daily.Internet.Usage
Area_Income <- data$Area.Income


boxplot(Daily_Time_Spent_on_Site, Daily_Internet_Usage,
main = "Multiple boxplots to check for outliers",
at = c(1,2),
names = c("Time", "Usage"),
las = 2,
col = c("orange", "blue"),
border = "brown",
horizontal = TRUE,
notch = TRUE
)
```



There are no outliers

```
boxplot(Age, Area_Income ,
main = "Multiple boxplots to check for outliers",
at = c(1,2),
names = c("Age", "Income"),
las = 2,
col = c("orange", "red"),
border = "brown",
horizontal = TRUE,
notch = TRUE
)
```



There are some outliers in the Area Income Col. We will not remove the outliers as we are not sure of the context of area income.

c) Exploratory Data Analyis

Descriptive Analysis

```
#install.packages("lessR")
#library("lessR")
```

Measures of Central Tendancy MEAN

```
x2 <- list(mean(data$Age), mean(data$Daily.Time.Spent.on.Site), mean(data$Daily.Internet.Usage), mean(da

for(i in x2) {

  print(paste("The mean is", i))#Displays the mean of our numerical variables: Age, Daily Time Spent on
}
```

```
## [1] "The mean is 36.009"
## [1] "The mean is 65.0002"
## [1] "The mean is 180.0001"
## [1] "The mean is 55000.00008"
```

MEDIAN

```
median(data$Age)
```

```
## [1] 35
```

```
median(data$Daily.Time.Spent.on.Site)
```

```
## [1] 68.215
```

```
median(data$Daily.Internet.Usage)
```

```
## [1] 183.13
```

```
median(data$Area.Income) #Displays the median of our numerical variables: Age, Daily Time Spent on Site
```

```
## [1] 57012.3
```

MODE While mode is not exactly a measure of central tendancy, we will try to find the most frequent values across our variables

```
#install.packages("DescTools")
#library ("DescTools")
getmode <- function(v) {
   uniqv <- unique(v)
   uniqv[which.max(tabulate(match(v, uniqv)))]
}

age.mode = getmode(data$Age)
dailytime.mode = getmode(data$Daily.Time.Spent.on.Site)
dailyusage.mode = getmode(data$Daily.Internet.Usage)
aincome.mode = getmode(data$Area.Income)


print(dailytime.mode) ##Displays the median of our numerical variables: Age, #Daily Time Spent on Site,
```

```
## [1] 62.26
```

```
print(age.mode)
```

```
## [1] 31
```

```
print(aincome.mode)
```

```
## [1] 61833.9
```

```
print(dailyusage.mode)
```

```
## [1] 167.22
```

Measures of dispersion Standard deviation

```r
sd(data$Age)
```

```
## [1] 8.785562
```

```r
sd(data$Daily.Time.Spent.on.Site)
```

```
## [1] 15.85361
```

```r
sd(data$Daily.Internet.Usage)
```

```
## [1] 43.90234
```

```r
sd(data$Area.Income) #Displays the standard of our numerical variables: Age, Daily Time Spent on Site,
```

```
## [1] 13414.63
```

Range

```r
range(data$Age)
```

```
## [1] 19 61
```

```r
range(data$Daily.Time.Spent.on.Site)
```

```
## [1] 32.60 91.43
```

```r
range(data$Daily.Internet.Usage)
```

```
## [1] 104.78 269.96
```

```r
range(data$Area.Income) #Displays the range of our numerical variables: Age, Daily Time Spent on Site,
```

```
## [1] 13996.5 79484.8
```

Min

```r
min(data$Age)
```

```
## [1] 19
```

```r
min(data$Daily.Time.Spent.on.Site)
```

```
## [1] 32.6
```

```
min(data$Daily.Internet.Usage)
```

```
## [1] 104.78
```

```
min(data$Area.Income) #Displays the minimum value of our numerical variables: Age, Daily Time Spent on
```

```
## [1] 13996.5
```

Max

```
max(data$Age)
```

```
## [1] 61
```

```
max(data$Daily.Time.Spent.on.Site)
```

```
## [1] 91.43
```

```
max(data$Daily.Internet.Usage)
```

```
## [1] 269.96
```

```
max(data$Area.Income) #Displays the maximum value of our numerical variables: Age, Daily Time Spent on
```

```
## [1] 79484.8
```

Skewness

```
library(moments)
```

```
skewness(data$Age)
```

```
## [1] 0.4784227
```

```
skewness(data$Daily.Time.Spent.on.Site)
```

```
## [1] -0.3712026
```

```
skewness(data$Daily.Internet.Usage)
```

```
## [1] -0.03348703
```

```
skewness(data$Area.Income) #Displays the skewness of our numerical variables: Age, Daily Time Spent on
```

```
## [1] -0.6493967
```

Kurtosis

```
kurtosis(data$Age)
```

```
## [1] 2.595482
```

```
kurtosis(data$Daily.Time.Spent.on.Site)
```

```
## [1] 1.903942
```

```
kurtosis(data$Daily.Internet.Usage)
```

```
## [1] 1.727701
```

```
kurtosis(data$Area.Income) #Displays the kurtosis of our numerical variables: Age, Daily Time Spent on
```

```
## [1] 2.894694
```

The distribution of the Age variable is positively skewed meaning its tail is on the right side while the rest of the variables are negatively skewed while all the variable have a negative kurtosis implying thin tails.

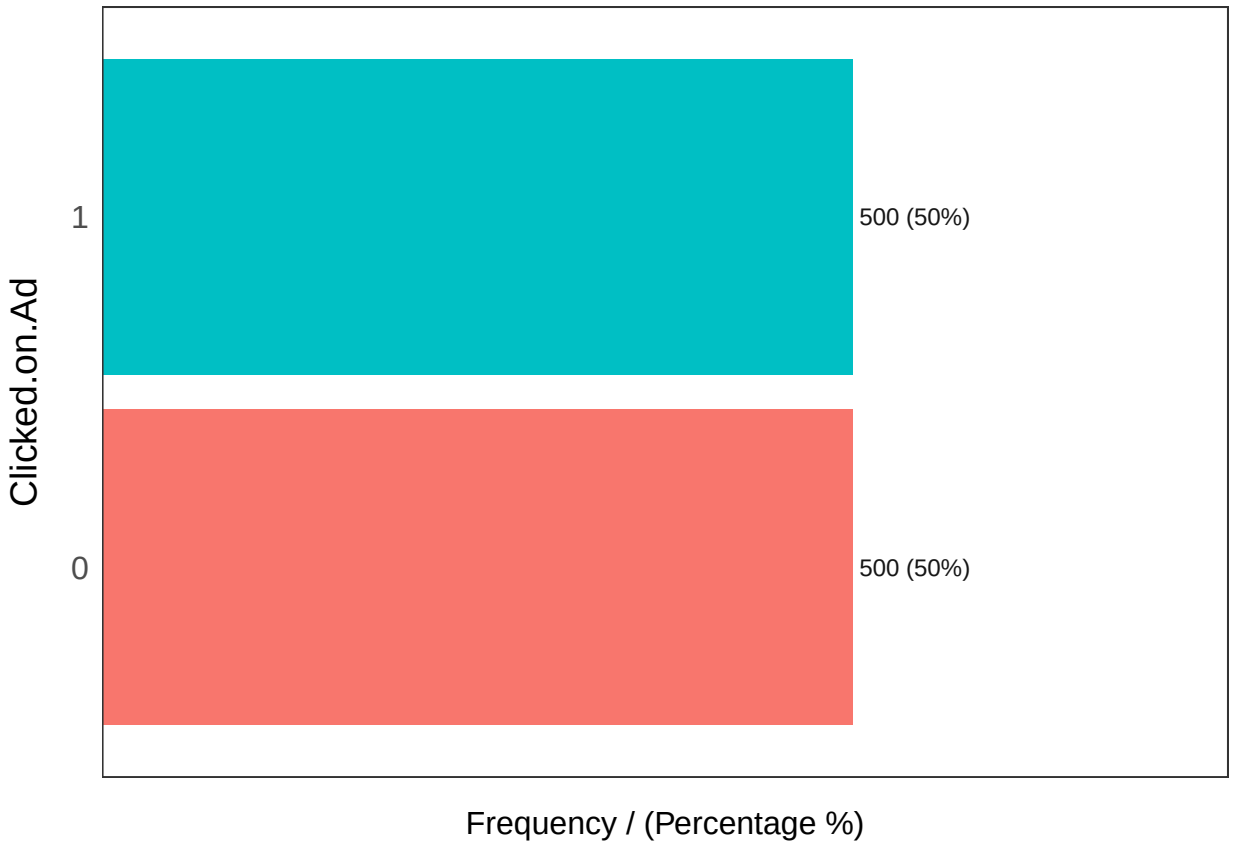
Uni variate visualizations

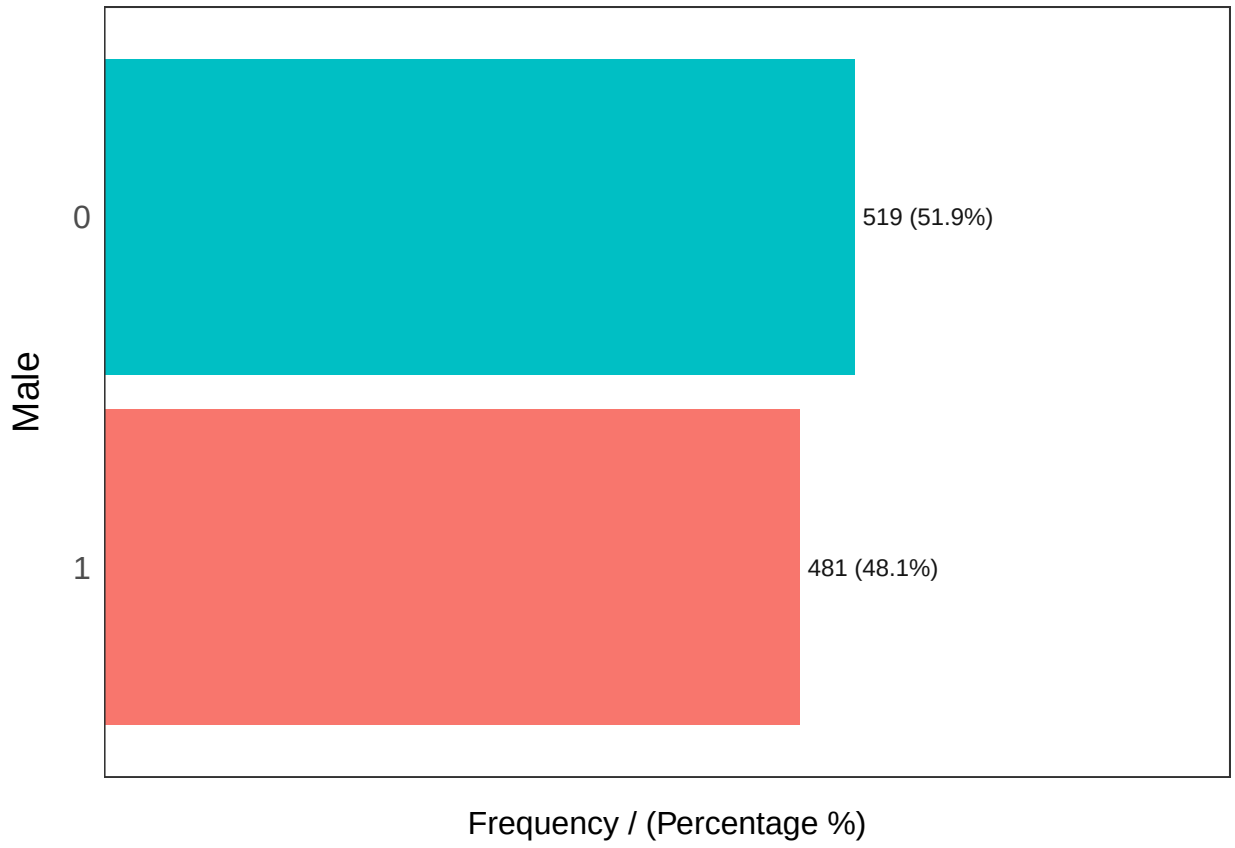
```
#Profiling our Categorical variables
freq(data=data, input = c('Clicked.on.Ad','Male'))
```

```
## Warning: `guides(<scale> = FALSE)` is deprecated. Please use `guides(<scale> =
## "none")` instead.
```

```
##   Clicked.on.Ad frequency percentage cumulative_perc
## 1             0       500         50               50
## 2             1       500         50              100
```

```
## Warning: `guides(<scale> = FALSE)` is deprecated. Please use `guides(<scale> =
## "none")` instead.
```


Clicked.on.Ad
1
0
500 (50%)
500 (50%)
Frequency / (Percentage %)




```
##   Male frequency percentage cumulative_perc
## 1    0       519       51.9            51.9
## 2    1       481       48.1           100.0
```

```
## [1] "Variables processed: Clicked.on.Ad, Male"
```

48.1% of our subjects are male while 51.9% are not as depicted above while the click on adds is balanced (50-50%)

```
freq(data=data$Timestamp)
```

```
## Warning in freq_logic(data = data, input = input, plot, na.rm, path_out =
## path_out): Skipping plot for variable 'var' (more than 100 categories)
```

```
##                    var frequency percentage cumulative_perc
## 1  2016-01-01 02:52:10         1        0.1             0.1
## 2  2016-01-01 03:35:35         1        0.1             0.2
## 3  2016-01-01 05:31:22         1        0.1             0.3
## 4  2016-01-01 08:27:06         1        0.1             0.4
## 5  2016-01-01 15:14:24         1        0.1             0.5
## 6  2016-01-01 20:17:49         1        0.1             0.6
## 7  2016-01-01 21:58:55         1        0.1             0.7
## 8  2016-01-02 04:50:44         1        0.1             0.8
## 9  2016-01-02 09:30:11         1        0.1             0.9
```

```
## 10   2016-01-02 12:25:36         1         0.1             1.0
## 11   2016-01-02 14:36:03         1         0.1             1.1
## 12   2016-01-03 03:22:15         1         0.1             1.2
## 13   2016-01-03 04:39:47         1         0.1             1.3
## 14   2016-01-03 05:34:33         1         0.1             1.4
## 15   2016-01-03 07:13:53         1         0.1             1.5
## 16   2016-01-03 16:01:40         1         0.1             1.6
## 17   2016-01-03 16:30:51         1         0.1             1.7
## 18   2016-01-03 17:10:05         1         0.1             1.8
## 19   2016-01-03 23:21:26         1         0.1             1.9
## 20   2016-01-04 00:44:57         1         0.1             2.0
## 21   2016-01-04 04:00:35         1         0.1             2.1
## 22   2016-01-04 06:37:15         1         0.1             2.2
## 23   2016-01-04 07:28:43         1         0.1             2.3
## 24   2016-01-04 21:48:38         1         0.1             2.4
## 25   2016-01-04 22:27:25         1         0.1             2.5
## 26   2016-01-05 00:02:53         1         0.1             2.6
## 27   2016-01-05 04:18:46         1         0.1             2.7
## 28   2016-01-05 06:34:20         1         0.1             2.8
## 29   2016-01-05 07:52:48         1         0.1             2.9
## 30   2016-01-05 09:42:22         1         0.1             3.0
## 31   2016-01-05 11:53:17         1         0.1             3.1
## 32   2016-01-05 12:59:07         1         0.1             3.2
## 33   2016-01-05 16:26:44         1         0.1             3.3
## 34   2016-01-05 16:34:31         1         0.1             3.4
## 35   2016-01-05 17:56:52         1         0.1             3.5
## 36   2016-01-05 20:58:42         1         0.1             3.6
## 37   2016-01-06 13:20:01         1         0.1             3.7
## 38   2016-01-06 21:43:22         1         0.1             3.8
## 39   2016-01-07 13:25:21         1         0.1             3.9
## 40   2016-01-07 13:58:51         1         0.1             4.0
## 41   2016-01-07 19:16:05         1         0.1             4.1
## 42   2016-01-07 21:21:50         1         0.1             4.2
## 43   2016-01-07 23:02:43         1         0.1             4.3
## 44   2016-01-08 00:17:27         1         0.1             4.4
## 45   2016-01-08 02:34:06         1         0.1             4.5
## 46   2016-01-08 08:08:47         1         0.1             4.6
## 47   2016-01-08 09:32:26         1         0.1             4.7
## 48   2016-01-08 18:13:43         1         0.1             4.8
## 49   2016-01-08 19:38:45         1         0.1             4.9
## 50   2016-01-08 22:47:10         1         0.1             5.0
## 51   2016-01-09 03:45:19         1         0.1             5.1
## 52   2016-01-09 04:53:22         1         0.1             5.2
## 53   2016-01-09 05:44:56         1         0.1             5.3
## 54   2016-01-09 07:28:16         1         0.1             5.4
## 55   2016-01-09 15:49:28         1         0.1             5.5
## 56   2016-01-09 17:33:03         1         0.1             5.6
## 57   2016-01-10 02:31:19         1         0.1             5.7
## 58   2016-01-10 20:18:21         1         0.1             5.8
## 59   2016-01-10 23:14:30         1         0.1             5.9
## 60   2016-01-11 02:07:14         1         0.1             6.0
## 61   2016-01-11 06:02:27         1         0.1             6.1
## 62   2016-01-11 07:36:22         1         0.1             6.2
## 63   2016-01-11 08:18:12         1         0.1             6.3
```

```
## 64   2016-01-11 12:46:31        1        0.1            6.4
## 65   2016-01-12 03:28:31        1        0.1            6.5
## 66   2016-01-12 10:07:29        1        0.1            6.6
## 67   2016-01-12 21:17:15        1        0.1            6.7
## 68   2016-01-13 02:39:00        1        0.1            6.8
## 69   2016-01-13 02:58:27        1        0.1            6.9
## 70   2016-01-13 20:38:35        1        0.1            7.0
## 71   2016-01-14 00:23:10        1        0.1            7.1
## 72   2016-01-14 08:27:04        1        0.1            7.2
## 73   2016-01-14 09:27:59        1        0.1            7.3
## 74   2016-01-14 14:00:09        1        0.1            7.4
## 75   2016-01-14 16:30:38        1        0.1            7.5
## 76   2016-01-14 20:58:10        1        0.1            7.6
## 77   2016-01-15 01:20:05        1        0.1            7.7
## 78   2016-01-15 19:40:47        1        0.1            7.8
## 79   2016-01-15 19:45:33        1        0.1            7.9
## 80   2016-01-15 22:49:45        1        0.1            8.0
## 81   2016-01-16 08:01:40        1        0.1            8.1
## 82   2016-01-16 11:35:01        1        0.1            8.2
## 83   2016-01-16 16:40:30        1        0.1            8.3
## 84   2016-01-16 17:56:05        1        0.1            8.4
## 85   2016-01-16 23:37:51        1        0.1            8.5
## 86   2016-01-17 04:12:30        1        0.1            8.6
## 87   2016-01-17 05:07:11        1        0.1            8.7
## 88   2016-01-17 09:31:36        1        0.1            8.8
## 89   2016-01-17 13:27:13        1        0.1            8.9
## 90   2016-01-17 15:10:31        1        0.1            9.0
## 91   2016-01-17 18:45:55        1        0.1            9.1
## 92   2016-01-18 02:51:13        1        0.1            9.2
## 93   2016-01-18 15:18:01        1        0.1            9.3
## 94   2016-01-19 12:18:13        1        0.1            9.4
## 95   2016-01-20 00:26:15        1        0.1            9.5
## 96   2016-01-20 02:31:36        1        0.1            9.6
## 97   2016-01-20 19:09:37        1        0.1            9.7
## 98   2016-01-21 04:30:43        1        0.1            9.8
## 99   2016-01-21 18:51:01        1        0.1            9.9
## 100  2016-01-21 22:51:34        1        0.1           10.0
## 101  2016-01-21 23:33:22        1        0.1           10.1
## 102  2016-01-21 23:48:29        1        0.1           10.2
## 103  2016-01-22 12:58:14        1        0.1           10.3
## 104  2016-01-22 15:03:25        1        0.1           10.4
## 105  2016-01-22 19:43:53        1        0.1           10.5
## 106  2016-01-23 01:42:28        1        0.1           10.6
## 107  2016-01-23 04:47:37        1        0.1           10.7
## 108  2016-01-23 13:14:18        1        0.1           10.8
## 109  2016-01-23 15:02:13        1        0.1           10.9
## 110  2016-01-23 17:39:06        1        0.1           11.0
## 111  2016-01-23 18:59:21        1        0.1           11.1
## 112  2016-01-23 21:15:57        1        0.1           11.2
## 113  2016-01-24 01:53:14        1        0.1           11.3
## 114  2016-01-24 13:41:38        1        0.1           11.4
## 115  2016-01-25 07:39:41        1        0.1           11.5
## 116  2016-01-25 07:52:53        1        0.1           11.6
## 117  2016-01-26 02:47:17        1        0.1           11.7
```

```
## 118  2016-01-26 03:56:18         1         0.1            11.8
## 119  2016-01-26 15:56:55         1         0.1            11.9
## 120  2016-01-27 12:38:16         1         0.1            12.0
## 121  2016-01-27 14:41:10         1         0.1            12.1
## 122  2016-01-27 16:06:05         1         0.1            12.2
## 123  2016-01-27 17:08:19         1         0.1            12.3
## 124  2016-01-27 17:55:44         1         0.1            12.4
## 125  2016-01-27 18:25:42         1         0.1            12.5
## 126  2016-01-27 20:47:57         1         0.1            12.6
## 127  2016-01-28 07:10:29         1         0.1            12.7
## 128  2016-01-28 11:50:40         1         0.1            12.8
## 129  2016-01-28 16:42:36         1         0.1            12.9
## 130  2016-01-28 17:03:54         1         0.1            13.0
## 131  2016-01-28 20:59:32         1         0.1            13.1
## 132  2016-01-29 00:45:19         1         0.1            13.2
## 133  2016-01-29 03:54:19         1         0.1            13.3
## 134  2016-01-29 05:39:16         1         0.1            13.4
## 135  2016-01-29 07:14:04         1         0.1            13.5
## 136  2016-01-29 20:16:54         1         0.1            13.6
## 137  2016-01-30 00:05:37         1         0.1            13.7
## 138  2016-01-30 04:38:41         1         0.1            13.8
## 139  2016-01-30 09:54:03         1         0.1            13.9
## 140  2016-01-30 16:10:04         1         0.1            14.0
## 141  2016-01-30 16:15:29         1         0.1            14.1
## 142  2016-01-30 19:20:41         1         0.1            14.2
## 143  2016-01-31 04:10:20         1         0.1            14.3
## 144  2016-01-31 05:12:44         1         0.1            14.4
## 145  2016-01-31 06:14:10         1         0.1            14.5
## 146  2016-01-31 08:50:38         1         0.1            14.6
## 147  2016-01-31 09:57:34         1         0.1            14.7
## 148  2016-02-01 00:52:29         1         0.1            14.8
## 149  2016-02-01 09:00:55         1         0.1            14.9
## 150  2016-02-01 14:37:34         1         0.1            15.0
## 151  2016-02-01 17:24:57         1         0.1            15.1
## 152  2016-02-01 19:42:40         1         0.1            15.2
## 153  2016-02-01 20:30:35         1         0.1            15.3
## 154  2016-02-02 04:57:50         1         0.1            15.4
## 155  2016-02-02 08:55:26         1         0.1            15.5
## 156  2016-02-02 11:49:18         1         0.1            15.6
## 157  2016-02-02 19:59:17         1         0.1            15.7
## 158  2016-02-03 04:21:14         1         0.1            15.8
## 159  2016-02-03 05:47:09         1         0.1            15.9
## 160  2016-02-03 07:59:16         1         0.1            16.0
## 161  2016-02-03 10:40:27         1         0.1            16.1
## 162  2016-02-03 15:15:42         1         0.1            16.2
## 163  2016-02-03 16:54:33         1         0.1            16.3
## 164  2016-02-03 19:12:51         1         0.1            16.4
## 165  2016-02-03 22:11:13         1         0.1            16.5
## 166  2016-02-03 23:47:56         1         0.1            16.6
## 167  2016-02-04 02:13:52         1         0.1            16.7
## 168  2016-02-04 03:10:17         1         0.1            16.8
## 169  2016-02-04 08:53:37         1         0.1            16.9
## 170  2016-02-04 13:30:32         1         0.1            17.0
## 171  2016-02-05 15:26:37         1         0.1            17.1
```

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## 172  2016-02-05 16:50:58         1         0.1           17.2
## 173  2016-02-05 19:06:01         1         0.1           17.3
## 174  2016-02-06 17:48:28         1         0.1           17.4
## 175  2016-02-06 23:08:57         1         0.1           17.5
## 176  2016-02-07 07:41:06         1         0.1           17.6
## 177  2016-02-07 08:02:31         1         0.1           17.7
## 178  2016-02-07 17:06:35         1         0.1           17.8
## 179  2016-02-08 00:23:38         1         0.1           17.9
## 180  2016-02-08 07:33:22         1         0.1           18.0
## 181  2016-02-08 10:46:14         1         0.1           18.1
## 182  2016-02-08 14:02:22         1         0.1           18.2
## 183  2016-02-08 22:45:26         1         0.1           18.3
## 184  2016-02-09 05:28:18         1         0.1           18.4
## 185  2016-02-09 07:21:25         1         0.1           18.5
## 186  2016-02-09 19:37:52         1         0.1           18.6
## 187  2016-02-09 22:04:54         1         0.1           18.7
## 188  2016-02-09 23:38:30         1         0.1           18.8
## 189  2016-02-10 06:37:56         1         0.1           18.9
## 190  2016-02-10 06:52:07         1         0.1           19.0
## 191  2016-02-10 08:21:13         1         0.1           19.1
## 192  2016-02-10 13:46:35         1         0.1           19.2
## 193  2016-02-10 15:23:17         1         0.1           19.3
## 194  2016-02-10 19:20:51         1         0.1           19.4
## 195  2016-02-10 20:43:38         1         0.1           19.5
## 196  2016-02-11 02:40:02         1         0.1           19.6
## 197  2016-02-11 04:37:34         1         0.1           19.7
## 198  2016-02-11 11:50:26         1         0.1           19.8
## 199  2016-02-11 13:26:22         1         0.1           19.9
## 200  2016-02-11 16:45:41         1         0.1           20.0
## 201  2016-02-11 17:02:07         1         0.1           20.1
## 202  2016-02-11 20:45:46         1         0.1           20.2
## 203  2016-02-11 21:49:00         1         0.1           20.3
## 204  2016-02-11 23:45:01         1         0.1           20.4
## 205  2016-02-12 01:55:38         1         0.1           20.5
## 206  2016-02-12 03:39:09         1         0.1           20.6
## 207  2016-02-12 05:20:19         1         0.1           20.7
## 208  2016-02-12 08:46:15         1         0.1           20.8
## 209  2016-02-12 10:39:10         1         0.1           20.9
## 210  2016-02-12 20:36:40         1         0.1           21.0
## 211  2016-02-12 22:51:08         1         0.1           21.1
## 212  2016-02-13 04:16:08         1         0.1           21.2
## 213  2016-02-13 07:53:55         1         0.1           21.3
## 214  2016-02-13 13:57:53         1         0.1           21.4
## 215  2016-02-13 15:37:36         1         0.1           21.5
## 216  2016-02-14 03:50:52         1         0.1           21.6
## 217  2016-02-14 04:14:13         1         0.1           21.7
## 218  2016-02-14 06:51:43         1         0.1           21.8
## 219  2016-02-14 07:15:37         1         0.1           21.9
## 220  2016-02-14 07:30:24         1         0.1           22.0
## 221  2016-02-14 07:36:58         1         0.1           22.1
## 222  2016-02-14 10:06:49         1         0.1           22.2
## 223  2016-02-14 11:36:08         1         0.1           22.3
## 224  2016-02-14 14:38:01         1         0.1           22.4
## 225  2016-02-14 16:33:29         1         0.1           22.5
```

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## 226  2016-02-14 17:05:15         1        0.1           22.6
## 227  2016-02-14 22:23:30         1        0.1           22.7
## 228  2016-02-15 03:43:55         1        0.1           22.8
## 229  2016-02-15 05:35:54         1        0.1           22.9
## 230  2016-02-15 07:27:41         1        0.1           23.0
## 231  2016-02-15 07:55:10         1        0.1           23.1
## 232  2016-02-15 12:25:28         1        0.1           23.2
## 233  2016-02-15 14:13:47         1        0.1           23.3
## 234  2016-02-15 16:18:49         1        0.1           23.4
## 235  2016-02-15 16:52:04         1        0.1           23.5
## 236  2016-02-15 20:41:05         1        0.1           23.6
## 237  2016-02-16 02:29:03         1        0.1           23.7
## 238  2016-02-16 07:37:28         1        0.1           23.8
## 239  2016-02-16 09:11:27         1        0.1           23.9
## 240  2016-02-16 12:05:45         1        0.1           24.0
## 241  2016-02-16 18:21:36         1        0.1           24.1
## 242  2016-02-17 07:00:38         1        0.1           24.2
## 243  2016-02-17 07:05:57         1        0.1           24.3
## 244  2016-02-17 11:15:31         1        0.1           24.4
## 245  2016-02-17 11:42:00         1        0.1           24.5
## 246  2016-02-17 13:16:33         1        0.1           24.6
## 247  2016-02-17 18:50:57         1        0.1           24.7
## 248  2016-02-17 20:22:49         1        0.1           24.8
## 249  2016-02-17 21:55:29         1        0.1           24.9
## 250  2016-02-17 23:47:00         1        0.1           25.0
## 251  2016-02-18 03:58:36         1        0.1           25.1
## 252  2016-02-18 22:42:33         1        0.1           25.2
## 253  2016-02-18 23:08:59         1        0.1           25.3
## 254  2016-02-19 07:29:30         1        0.1           25.4
## 255  2016-02-19 13:26:24         1        0.1           25.5
## 256  2016-02-19 20:49:27         1        0.1           25.6
## 257  2016-02-20 00:06:20         1        0.1           25.7
## 258  2016-02-20 09:54:06         1        0.1           25.8
## 259  2016-02-20 10:52:51         1        0.1           25.9
## 260  2016-02-20 20:47:05         1        0.1           26.0
## 261  2016-02-21 05:23:28         1        0.1           26.1
## 262  2016-02-21 07:42:48         1        0.1           26.2
## 263  2016-02-21 13:11:08         1        0.1           26.3
## 264  2016-02-21 16:57:59         1        0.1           26.4
## 265  2016-02-21 20:09:12         1        0.1           26.5
## 266  2016-02-21 23:07:11         1        0.1           26.6
## 267  2016-02-22 07:04:05         1        0.1           26.7
## 268  2016-02-23 13:55:48         1        0.1           26.8
## 269  2016-02-23 17:37:46         1        0.1           26.9
## 270  2016-02-24 00:44:44         1        0.1           27.0
## 271  2016-02-24 04:11:37         1        0.1           27.1
## 272  2016-02-24 06:17:18         1        0.1           27.2
## 273  2016-02-24 06:18:11         1        0.1           27.3
## 274  2016-02-24 07:13:00         1        0.1           27.4
## 275  2016-02-24 10:36:43         1        0.1           27.5
## 276  2016-02-24 19:08:11         1        0.1           27.6
## 277  2016-02-25 16:33:24         1        0.1           27.7
## 278  2016-02-26 01:18:44         1        0.1           27.8
## 279  2016-02-26 04:57:14         1        0.1           27.9
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## 280  2016-02-26 06:00:16         1         0.1           28.0
## 281  2016-02-26 09:18:48         1         0.1           28.1
## 282  2016-02-26 09:54:33         1         0.1           28.2
## 283  2016-02-26 17:01:01         1         0.1           28.3
## 284  2016-02-26 17:14:14         1         0.1           28.4
## 285  2016-02-26 19:35:54         1         0.1           28.5
## 286  2016-02-26 19:48:23         1         0.1           28.6
## 287  2016-02-26 22:46:43         1         0.1           28.7
## 288  2016-02-26 23:44:44         1         0.1           28.8
## 289  2016-02-27 04:43:07         1         0.1           28.9
## 290  2016-02-27 08:52:50         1         0.1           29.0
## 291  2016-02-27 12:34:19         1         0.1           29.1
## 292  2016-02-27 13:51:44         1         0.1           29.2
## 293  2016-02-27 15:04:52         1         0.1           29.3
## 294  2016-02-27 20:20:25         1         0.1           29.4
## 295  2016-02-28 03:34:35         1         0.1           29.5
## 296  2016-02-28 06:41:44         1         0.1           29.6
## 297  2016-02-28 09:31:31         1         0.1           29.7
## 298  2016-02-28 18:52:44         1         0.1           29.8
## 299  2016-02-28 22:02:14         1         0.1           29.9
## 300  2016-02-28 23:10:32         1         0.1           30.0
## 301  2016-02-28 23:21:22         1         0.1           30.1
## 302  2016-02-28 23:54:44         1         0.1           30.2
## 303  2016-02-29 11:00:06         1         0.1           30.3
## 304  2016-02-29 12:31:57         1         0.1           30.4
## 305  2016-02-29 18:06:21         1         0.1           30.5
## 306  2016-02-29 19:26:35         1         0.1           30.6
## 307  2016-02-29 23:56:06         1         0.1           30.7
## 308  2016-03-01 10:01:35         1         0.1           30.8
## 309  2016-03-01 22:06:37         1         0.1           30.9
## 310  2016-03-01 22:13:37         1         0.1           31.0
## 311  2016-03-02 04:02:45         1         0.1           31.1
## 312  2016-03-02 04:57:51         1         0.1           31.2
## 313  2016-03-02 05:11:01         1         0.1           31.3
## 314  2016-03-02 06:35:08         1         0.1           31.4
## 315  2016-03-02 10:07:43         1         0.1           31.5
## 316  2016-03-02 15:39:02         1         0.1           31.6
## 317  2016-03-03 02:59:37         1         0.1           31.7
## 318  2016-03-03 03:13:48         1         0.1           31.8
## 319  2016-03-03 03:51:27         1         0.1           31.9
## 320  2016-03-03 20:20:32         1         0.1           32.0
## 321  2016-03-03 22:31:16         1         0.1           32.1
## 322  2016-03-04 08:48:29         1         0.1           32.2
## 323  2016-03-04 10:13:48         1         0.1           32.3
## 324  2016-03-04 13:47:47         1         0.1           32.4
## 325  2016-03-04 14:10:12         1         0.1           32.5
## 326  2016-03-04 14:33:38         1         0.1           32.6
## 327  2016-03-05 12:03:41         1         0.1           32.7
## 328  2016-03-05 20:53:19         1         0.1           32.8
## 329  2016-03-05 23:02:11         1         0.1           32.9
## 330  2016-03-06 06:51:23         1         0.1           33.0
## 331  2016-03-06 09:33:46         1         0.1           33.1
## 332  2016-03-06 11:36:06         1         0.1           33.2
## 333  2016-03-06 23:26:44         1         0.1           33.3
```

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## 334  2016-03-07 01:40:15         1         0.1           33.4
## 335  2016-03-07 20:02:51         1         0.1           33.5
## 336  2016-03-07 22:32:15         1         0.1           33.6
## 337  2016-03-07 22:51:00         1         0.1           33.7
## 338  2016-03-08 00:37:54         1         0.1           33.8
## 339  2016-03-08 05:12:57         1         0.1           33.9
## 340  2016-03-08 05:48:20         1         0.1           34.0
## 341  2016-03-08 10:39:16         1         0.1           34.1
## 342  2016-03-08 18:00:43         1         0.1           34.2
## 343  2016-03-09 00:41:46         1         0.1           34.3
## 344  2016-03-09 02:07:17         1         0.1           34.4
## 345  2016-03-09 03:41:30         1         0.1           34.5
## 346  2016-03-09 06:22:03         1         0.1           34.6
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## 348  2016-03-09 14:45:33         1         0.1           34.8
## 349  2016-03-09 14:57:11         1         0.1           34.9
## 350  2016-03-10 01:36:19         1         0.1           35.0
## 351  2016-03-10 07:07:31         1         0.1           35.1
## 352  2016-03-10 15:07:44         1         0.1           35.2
## 353  2016-03-10 22:28:52         1         0.1           35.3
## 354  2016-03-10 23:26:54         1         0.1           35.4
## 355  2016-03-10 23:36:03         1         0.1           35.5
## 356  2016-03-11 00:05:48         1         0.1           35.6
## 357  2016-03-11 06:49:10         1         0.1           35.7
## 358  2016-03-11 09:58:32         1         0.1           35.8
## 359  2016-03-11 10:01:23         1         0.1           35.9
## 360  2016-03-11 12:39:19         1         0.1           36.0
## 361  2016-03-11 13:07:30         1         0.1           36.1
## 362  2016-03-11 14:50:56         1         0.1           36.2
## 363  2016-03-12 01:39:19         1         0.1           36.3
## 364  2016-03-12 02:48:18         1         0.1           36.4
## 365  2016-03-12 06:05:12         1         0.1           36.5
## 366  2016-03-12 07:18:36         1         0.1           36.6
## 367  2016-03-13 13:50:25         1         0.1           36.7
## 368  2016-03-13 20:35:42         1         0.1           36.8
## 369  2016-03-14 03:29:12         1         0.1           36.9
## 370  2016-03-14 04:34:35         1         0.1           37.0
## 371  2016-03-14 06:46:14         1         0.1           37.1
## 372  2016-03-14 14:13:05         1         0.1           37.2
## 373  2016-03-14 23:13:11         1         0.1           37.3
## 374  2016-03-15 03:12:25         1         0.1           37.4
## 375  2016-03-15 06:54:21         1         0.1           37.5
## 376  2016-03-15 11:25:48         1         0.1           37.6
## 377  2016-03-15 14:06:17         1         0.1           37.7
## 378  2016-03-15 14:33:12         1         0.1           37.8
## 379  2016-03-15 15:49:14         1         0.1           37.9
## 380  2016-03-15 17:33:15         1         0.1           38.0
## 381  2016-03-15 19:35:19         1         0.1           38.1
## 382  2016-03-15 20:19:20         1         0.1           38.2
## 383  2016-03-16 00:28:10         1         0.1           38.3
## 384  2016-03-16 07:59:37         1         0.1           38.4
## 385  2016-03-16 20:10:53         1         0.1           38.5
## 386  2016-03-16 20:19:01         1         0.1           38.6
## 387  2016-03-16 20:33:10         1         0.1           38.7
```

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## 388  2016-03-17 05:00:12         1         0.1           38.8
## 389  2016-03-17 06:25:47         1         0.1           38.9
## 390  2016-03-17 22:24:02         1         0.1           39.0
## 391  2016-03-17 22:59:46         1         0.1           39.1
## 392  2016-03-17 23:39:28         1         0.1           39.2
## 393  2016-03-18 02:39:26         1         0.1           39.3
## 394  2016-03-18 09:08:39         1         0.1           39.4
## 395  2016-03-18 13:00:12         1         0.1           39.5
## 396  2016-03-18 13:22:35         1         0.1           39.6
## 397  2016-03-18 16:04:59         1         0.1           39.7
## 398  2016-03-18 17:35:40         1         0.1           39.8
## 399  2016-03-19 00:27:58         1         0.1           39.9
## 400  2016-03-19 08:00:58         1         0.1           40.0
## 401  2016-03-19 11:09:36         1         0.1           40.1
## 402  2016-03-19 14:23:45         1         0.1           40.2
## 403  2016-03-19 14:57:00         1         0.1           40.3
## 404  2016-03-20 02:44:13         1         0.1           40.4
## 405  2016-03-20 07:12:52         1         0.1           40.5
## 406  2016-03-20 08:22:50         1         0.1           40.6
## 407  2016-03-20 22:27:25         1         0.1           40.7
## 408  2016-03-21 08:13:24         1         0.1           40.8
## 409  2016-03-21 11:02:49         1         0.1           40.9
## 410  2016-03-21 18:46:41         1         0.1           41.0
## 411  2016-03-21 21:15:54         1         0.1           41.1
## 412  2016-03-22 04:13:35         1         0.1           41.2
## 413  2016-03-22 06:41:38         1         0.1           41.3
## 414  2016-03-22 19:14:47         1         0.1           41.4
## 415  2016-03-23 05:27:35         1         0.1           41.5
## 416  2016-03-23 06:00:15         1         0.1           41.6
## 417  2016-03-23 08:52:31         1         0.1           41.7
## 418  2016-03-23 09:43:43         1         0.1           41.8
## 419  2016-03-23 12:53:23         1         0.1           41.9
## 420  2016-03-23 19:58:15         1         0.1           42.0
## 421  2016-03-23 21:06:51         1         0.1           42.1
## 422  2016-03-24 02:01:55         1         0.1           42.2
## 423  2016-03-24 02:35:54         1         0.1           42.3
## 424  2016-03-24 05:38:01         1         0.1           42.4
## 425  2016-03-24 06:36:52         1         0.1           42.5
## 426  2016-03-24 09:12:52         1         0.1           42.6
## 427  2016-03-24 09:31:49         1         0.1           42.7
## 428  2016-03-24 09:34:00         1         0.1           42.8
## 429  2016-03-24 13:37:53         1         0.1           42.9
## 430  2016-03-24 17:48:31         1         0.1           43.0
## 431  2016-03-25 05:05:27         1         0.1           43.1
## 432  2016-03-25 06:36:53         1         0.1           43.2
## 433  2016-03-25 08:40:15         1         0.1           43.3
## 434  2016-03-25 15:17:39         1         0.1           43.4
## 435  2016-03-25 19:02:35         1         0.1           43.5
## 436  2016-03-26 00:32:02         1         0.1           43.6
## 437  2016-03-26 15:28:07         1         0.1           43.7
## 438  2016-03-26 19:37:46         1         0.1           43.8
## 439  2016-03-26 19:54:16         1         0.1           43.9
## 440  2016-03-27 00:53:11         1         0.1           44.0
## 441  2016-03-27 02:35:29         1         0.1           44.1
```

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## 442  2016-03-27 03:59:26         1         0.1           44.2
## 443  2016-03-27 08:32:37         1         0.1           44.3
## 444  2016-03-27 09:11:10         1         0.1           44.4
## 445  2016-03-27 16:41:29         1         0.1           44.5
## 446  2016-03-27 19:50:11         1         0.1           44.6
## 447  2016-03-27 23:59:06         1         0.1           44.7
## 448  2016-03-28 02:29:19         1         0.1           44.8
## 449  2016-03-28 08:46:26         1         0.1           44.9
## 450  2016-03-28 09:15:58         1         0.1           45.0
## 451  2016-03-28 19:48:37         1         0.1           45.1
## 452  2016-03-28 23:01:24         1         0.1           45.2
## 453  2016-03-30 01:05:34         1         0.1           45.3
## 454  2016-03-30 05:29:38         1         0.1           45.4
## 455  2016-03-30 14:36:55         1         0.1           45.5
## 456  2016-03-30 16:15:59         1         0.1           45.6
## 457  2016-03-30 19:09:50         1         0.1           45.7
## 458  2016-03-30 20:23:48         1         0.1           45.8
## 459  2016-03-30 23:40:52         1         0.1           45.9
## 460  2016-03-31 08:53:43         1         0.1           46.0
## 461  2016-03-31 10:44:46         1         0.1           46.1
## 462  2016-03-31 13:54:51         1         0.1           46.2
## 463  2016-03-31 20:55:22         1         0.1           46.3
## 464  2016-04-01 01:57:12         1         0.1           46.4
## 465  2016-04-01 05:17:28         1         0.1           46.5
## 466  2016-04-01 07:37:18         1         0.1           46.6
## 467  2016-04-01 09:21:14         1         0.1           46.7
## 468  2016-04-01 16:21:05         1         0.1           46.8
## 469  2016-04-03 05:10:31         1         0.1           46.9
## 470  2016-04-03 06:17:22         1         0.1           47.0
## 471  2016-04-03 10:07:56         1         0.1           47.1
## 472  2016-04-03 11:38:36         1         0.1           47.2
## 473  2016-04-03 21:13:46         1         0.1           47.3
## 474  2016-04-04 00:02:20         1         0.1           47.4
## 475  2016-04-04 01:39:02         1         0.1           47.5
## 476  2016-04-04 03:57:48         1         0.1           47.6
## 477  2016-04-04 07:07:46         1         0.1           47.7
## 478  2016-04-04 08:19:54         1         0.1           47.8
## 479  2016-04-04 11:39:51         1         0.1           47.9
## 480  2016-04-04 13:56:14         1         0.1           48.0
## 481  2016-04-04 18:36:59         1         0.1           48.1
## 482  2016-04-04 20:01:12         1         0.1           48.2
## 483  2016-04-04 21:23:13         1         0.1           48.3
## 484  2016-04-04 21:30:46         1         0.1           48.4
## 485  2016-04-04 22:00:15         1         0.1           48.5
## 486  2016-04-05 05:54:15         1         0.1           48.6
## 487  2016-04-05 08:18:45         1         0.1           48.7
## 488  2016-04-05 18:02:49         1         0.1           48.8
## 489  2016-04-06 01:19:08         1         0.1           48.9
## 490  2016-04-06 05:55:43         1         0.1           49.0
## 491  2016-04-06 11:24:21         1         0.1           49.1
## 492  2016-04-06 14:16:52         1         0.1           49.2
## 493  2016-04-06 17:26:37         1         0.1           49.3
## 494  2016-04-06 21:20:07         1         0.1           49.4
## 495  2016-04-06 23:10:40         1         0.1           49.5
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## 496  2016-04-07 01:57:38         1         0.1           49.6
## 497  2016-04-07 03:56:16         1         0.1           49.7
## 498  2016-04-07 10:51:05         1         0.1           49.8
## 499  2016-04-07 15:18:10         1         0.1           49.9
## 500  2016-04-07 16:02:02         1         0.1           50.0
## 501  2016-04-07 18:52:57         1         0.1           50.1
## 502  2016-04-07 20:34:42         1         0.1           50.2
## 503  2016-04-07 20:38:02         1         0.1           50.3
## 504  2016-04-08 14:35:44         1         0.1           50.4
## 505  2016-04-08 22:40:55         1         0.1           50.5
## 506  2016-04-08 22:48:25         1         0.1           50.6
## 507  2016-04-09 09:26:39         1         0.1           50.7
## 508  2016-04-09 16:31:15         1         0.1           50.8
## 509  2016-04-09 23:26:42         1         0.1           50.9
## 510  2016-04-10 00:13:47         1         0.1           51.0
## 511  2016-04-10 02:02:36         1         0.1           51.1
## 512  2016-04-10 03:30:16         1         0.1           51.2
## 513  2016-04-10 06:32:11         1         0.1           51.3
## 514  2016-04-10 14:48:35         1         0.1           51.4
## 515  2016-04-10 16:08:09         1         0.1           51.5
## 516  2016-04-10 19:48:01         1         0.1           51.6
## 517  2016-04-12 03:26:39         1         0.1           51.7
## 518  2016-04-12 04:22:42         1         0.1           51.8
## 519  2016-04-12 12:35:39         1         0.1           51.9
## 520  2016-04-12 14:01:08         1         0.1           52.0
## 521  2016-04-13 05:42:52         1         0.1           52.1
## 522  2016-04-13 07:07:36         1         0.1           52.2
## 523  2016-04-13 13:04:47         1         0.1           52.3
## 524  2016-04-14 05:08:35         1         0.1           52.4
## 525  2016-04-14 21:37:49         1         0.1           52.5
## 526  2016-04-15 06:08:35         1         0.1           52.6
## 527  2016-04-15 10:16:49         1         0.1           52.7
## 528  2016-04-15 10:18:55         1         0.1           52.8
## 529  2016-04-15 11:51:14         1         0.1           52.9
## 530  2016-04-15 14:45:48         1         0.1           53.0
## 531  2016-04-15 15:07:17         1         0.1           53.1
## 532  2016-04-16 05:24:33         1         0.1           53.2
## 533  2016-04-16 08:36:08         1         0.1           53.3
## 534  2016-04-16 10:36:49         1         0.1           53.4
## 535  2016-04-16 11:53:43         1         0.1           53.5
## 536  2016-04-16 12:09:25         1         0.1           53.6
## 537  2016-04-16 12:26:31         1         0.1           53.7
## 538  2016-04-16 14:15:55         1         0.1           53.8
## 539  2016-04-16 16:38:35         1         0.1           53.9
## 540  2016-04-17 05:08:52         1         0.1           54.0
## 541  2016-04-17 06:58:18         1         0.1           54.1
## 542  2016-04-17 15:46:03         1         0.1           54.2
## 543  2016-04-17 18:38:14         1         0.1           54.3
## 544  2016-04-17 19:10:56         1         0.1           54.4
## 545  2016-04-17 21:39:11         1         0.1           54.5
## 546  2016-04-18 00:49:33         1         0.1           54.6
## 547  2016-04-18 03:41:56         1         0.1           54.7
## 548  2016-04-18 07:00:38         1         0.1           54.8
## 549  2016-04-18 09:33:42         1         0.1           54.9
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## 550  2016-04-18 11:23:05         1        0.1            55.0
## 551  2016-04-18 15:54:33         1        0.1            55.1
## 552  2016-04-18 21:07:28         1        0.1            55.2
## 553  2016-04-19 05:15:28         1        0.1            55.3
## 554  2016-04-19 07:34:28         1        0.1            55.4
## 555  2016-04-19 15:14:58         1        0.1            55.5
## 556  2016-04-20 00:41:53         1        0.1            55.6
## 557  2016-04-20 10:04:29         1        0.1            55.7
## 558  2016-04-20 13:36:42         1        0.1            55.8
## 559  2016-04-20 16:49:15         1        0.1            55.9
## 560  2016-04-20 21:49:22         1        0.1            56.0
## 561  2016-04-21 09:30:35         1        0.1            56.1
## 562  2016-04-21 12:34:28         1        0.1            56.2
## 563  2016-04-21 16:10:50         1        0.1            56.3
## 564  2016-04-21 18:31:27         1        0.1            56.4
## 565  2016-04-21 19:56:24         1        0.1            56.5
## 566  2016-04-21 20:29:35         1        0.1            56.6
## 567  2016-04-22 00:28:18         1        0.1            56.7
## 568  2016-04-22 02:07:01         1        0.1            56.8
## 569  2016-04-22 07:48:33         1        0.1            56.9
## 570  2016-04-22 08:31:24         1        0.1            57.0
## 571  2016-04-22 19:45:19         1        0.1            57.1
## 572  2016-04-22 20:10:22         1        0.1            57.2
## 573  2016-04-22 20:32:17         1        0.1            57.3
## 574  2016-04-22 22:01:21         1        0.1            57.4
## 575  2016-04-23 03:46:34         1        0.1            57.5
## 576  2016-04-23 06:28:43         1        0.1            57.6
## 577  2016-04-23 08:15:31         1        0.1            57.7
## 578  2016-04-23 09:42:08         1        0.1            57.8
## 579  2016-04-23 14:34:38         1        0.1            57.9
## 580  2016-04-24 01:48:21         1        0.1            58.0
## 581  2016-04-24 07:20:16         1        0.1            58.1
## 582  2016-04-24 13:42:15         1        0.1            58.2
## 583  2016-04-24 13:46:10         1        0.1            58.3
## 584  2016-04-25 03:18:45         1        0.1            58.4
## 585  2016-04-25 07:30:21         1        0.1            58.5
## 586  2016-04-25 11:01:54         1        0.1            58.6
## 587  2016-04-25 16:58:50         1        0.1            58.7
## 588  2016-04-25 19:31:39         1        0.1            58.8
## 589  2016-04-25 21:15:39         1        0.1            58.9
## 590  2016-04-26 13:13:20         1        0.1            59.0
## 591  2016-04-26 20:57:48         1        0.1            59.1
## 592  2016-04-26 21:45:50         1        0.1            59.2
## 593  2016-04-27 04:28:17         1        0.1            59.3
## 594  2016-04-27 09:27:58         1        0.1            59.4
## 595  2016-04-27 18:25:30         1        0.1            59.5
## 596  2016-04-28 01:24:34         1        0.1            59.6
## 597  2016-04-28 02:55:10         1        0.1            59.7
## 598  2016-04-28 05:50:25         1        0.1            59.8
## 599  2016-04-28 18:34:56         1        0.1            59.9
## 600  2016-04-28 21:58:25         1        0.1            60.0
## 601  2016-04-28 22:54:37         1        0.1            60.1
## 602  2016-04-29 07:49:01         1        0.1            60.2
## 603  2016-04-29 13:38:19         1        0.1            60.3
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## 604  2016-04-29 14:08:26         1         0.1           60.4
## 605  2016-04-29 14:10:00         1         0.1           60.5
## 606  2016-04-29 18:53:43         1         0.1           60.6
## 607  2016-04-29 20:40:21         1         0.1           60.7
## 608  2016-04-30 08:07:13         1         0.1           60.8
## 609  2016-04-30 15:27:22         1         0.1           60.9
## 610  2016-04-30 19:42:04         1         0.1           61.0
## 611  2016-05-01 00:23:13         1         0.1           61.1
## 612  2016-05-01 08:27:12         1         0.1           61.2
## 613  2016-05-01 09:23:25         1         0.1           61.3
## 614  2016-05-01 21:46:37         1         0.1           61.4
## 615  2016-05-01 23:21:53         1         0.1           61.5
## 616  2016-05-02 00:01:56         1         0.1           61.6
## 617  2016-05-02 07:00:58         1         0.1           61.7
## 618  2016-05-02 15:31:28         1         0.1           61.8
## 619  2016-05-02 18:37:01         1         0.1           61.9
## 620  2016-05-03 01:09:01         1         0.1           62.0
## 621  2016-05-03 08:21:23         1         0.1           62.1
## 622  2016-05-03 12:57:19         1         0.1           62.2
## 623  2016-05-03 16:02:50         1         0.1           62.3
## 624  2016-05-03 16:55:02         1         0.1           62.4
## 625  2016-05-03 21:19:58         1         0.1           62.5
## 626  2016-05-04 00:01:33         1         0.1           62.6
## 627  2016-05-04 05:01:37         1         0.1           62.7
## 628  2016-05-04 09:00:24         1         0.1           62.8
## 629  2016-05-04 12:06:18         1         0.1           62.9
## 630  2016-05-05 07:58:22         1         0.1           63.0
## 631  2016-05-05 09:28:36         1         0.1           63.1
## 632  2016-05-05 11:07:13         1         0.1           63.2
## 633  2016-05-05 11:09:29         1         0.1           63.3
## 634  2016-05-06 21:07:31         1         0.1           63.4
## 635  2016-05-07 08:39:47         1         0.1           63.5
## 636  2016-05-07 15:16:07         1         0.1           63.6
## 637  2016-05-07 17:11:49         1         0.1           63.7
## 638  2016-05-07 21:32:51         1         0.1           63.8
## 639  2016-05-08 08:10:10         1         0.1           63.9
## 640  2016-05-08 10:25:08         1         0.1           64.0
## 641  2016-05-08 12:08:26         1         0.1           64.1
## 642  2016-05-08 12:12:04         1         0.1           64.2
## 643  2016-05-08 12:51:00         1         0.1           64.3
## 644  2016-05-08 15:38:46         1         0.1           64.4
## 645  2016-05-08 22:24:27         1         0.1           64.5
## 646  2016-05-08 22:47:18         1         0.1           64.6
## 647  2016-05-09 02:58:58         1         0.1           64.7
## 648  2016-05-09 07:13:27         1         0.1           64.8
## 649  2016-05-09 08:44:55         1         0.1           64.9
## 650  2016-05-09 10:21:48         1         0.1           65.0
## 651  2016-05-09 21:54:38         1         0.1           65.1
## 652  2016-05-10 04:28:55         1         0.1           65.2
## 653  2016-05-10 07:22:37         1         0.1           65.3
## 654  2016-05-10 14:12:31         1         0.1           65.4
## 655  2016-05-10 17:13:47         1         0.1           65.5
## 656  2016-05-10 17:39:06         1         0.1           65.6
## 657  2016-05-11 19:13:42         1         0.1           65.7
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## 658  2016-05-11 22:02:17         1         0.1           65.8
## 659  2016-05-12 04:35:59         1         0.1           65.9
## 660  2016-05-12 12:11:12         1         0.1           66.0
## 661  2016-05-12 20:57:10         1         0.1           66.1
## 662  2016-05-12 21:32:06         1         0.1           66.2
## 663  2016-05-13 06:09:28         1         0.1           66.3
## 664  2016-05-13 11:51:10         1         0.1           66.4
## 665  2016-05-13 11:57:12         1         0.1           66.5
## 666  2016-05-13 14:12:39         1         0.1           66.6
## 667  2016-05-14 14:49:05         1         0.1           66.7
## 668  2016-05-14 23:08:14         1         0.1           66.8
## 669  2016-05-15 01:03:06         1         0.1           66.9
## 670  2016-05-15 03:10:50         1         0.1           67.0
## 671  2016-05-15 13:18:34         1         0.1           67.1
## 672  2016-05-15 14:41:49         1         0.1           67.2
## 673  2016-05-15 18:44:50         1         0.1           67.3
## 674  2016-05-15 20:48:40         1         0.1           67.4
## 675  2016-05-16 14:50:22         1         0.1           67.5
## 676  2016-05-16 18:51:59         1         0.1           67.6
## 677  2016-05-16 23:21:06         1         0.1           67.7
## 678  2016-05-17 04:27:31         1         0.1           67.8
## 679  2016-05-17 06:14:20         1         0.1           67.9
## 680  2016-05-17 18:06:46         1         0.1           68.0
## 681  2016-05-18 00:07:43         1         0.1           68.1
## 682  2016-05-18 01:00:52         1         0.1           68.2
## 683  2016-05-18 03:19:03         1         0.1           68.3
## 684  2016-05-18 19:33:51         1         0.1           68.4
## 685  2016-05-19 03:52:24         1         0.1           68.5
## 686  2016-05-19 04:23:41         1         0.1           68.6
## 687  2016-05-19 06:37:38         1         0.1           68.7
## 688  2016-05-19 09:30:12         1         0.1           68.8
## 689  2016-05-19 11:16:59         1         0.1           68.9
## 690  2016-05-19 14:30:17         1         0.1           69.0
## 691  2016-05-20 00:00:48         1         0.1           69.1
## 692  2016-05-20 08:49:33         1         0.1           69.2
## 693  2016-05-20 12:17:28         1         0.1           69.3
## 694  2016-05-20 12:17:59         1         0.1           69.4
## 695  2016-05-20 21:31:24         1         0.1           69.5
## 696  2016-05-21 01:36:16         1         0.1           69.6
## 697  2016-05-22 00:01:58         1         0.1           69.7
## 698  2016-05-22 15:17:25         1         0.1           69.8
## 699  2016-05-22 20:49:37         1         0.1           69.9
## 700  2016-05-22 21:54:23         1         0.1           70.0
## 701  2016-05-23 00:32:54         1         0.1           70.1
## 702  2016-05-23 02:15:04         1         0.1           70.2
## 703  2016-05-23 08:06:24         1         0.1           70.3
## 704  2016-05-23 21:00:45         1         0.1           70.4
## 705  2016-05-23 21:14:38         1         0.1           70.5
## 706  2016-05-24 09:50:41         1         0.1           70.6
## 707  2016-05-24 10:04:39         1         0.1           70.7
## 708  2016-05-24 10:16:38         1         0.1           70.8
## 709  2016-05-24 13:30:38         1         0.1           70.9
## 710  2016-05-24 17:07:08         1         0.1           71.0
## 711  2016-05-24 17:42:58         1         0.1           71.1
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## 712  2016-05-24 18:35:58         1         0.1           71.2
## 713  2016-05-25 00:19:57         1         0.1           71.3
## 714  2016-05-25 00:34:59         1         0.1           71.4
## 715  2016-05-25 10:39:28         1         0.1           71.5
## 716  2016-05-25 19:45:16         1         0.1           71.6
## 717  2016-05-25 20:10:02         1         0.1           71.7
## 718  2016-05-26 06:03:57         1         0.1           71.8
## 719  2016-05-26 10:33:00         1         0.1           71.9
## 720  2016-05-26 13:18:30         1         0.1           72.0
## 721  2016-05-26 13:28:36         1         0.1           72.1
## 722  2016-05-26 13:43:05         1         0.1           72.2
## 723  2016-05-26 15:40:12         1         0.1           72.3
## 724  2016-05-26 15:40:26         1         0.1           72.4
## 725  2016-05-26 22:49:47         1         0.1           72.5
## 726  2016-05-27 05:23:26         1         0.1           72.6
## 727  2016-05-27 05:35:27         1         0.1           72.7
## 728  2016-05-27 05:54:03         1         0.1           72.8
## 729  2016-05-27 06:19:27         1         0.1           72.9
## 730  2016-05-27 08:53:51         1         0.1           73.0
## 731  2016-05-27 12:45:37         1         0.1           73.1
## 732  2016-05-27 15:25:52         1         0.1           73.2
## 733  2016-05-27 18:45:35         1         0.1           73.3
## 734  2016-05-28 12:20:15         1         0.1           73.4
## 735  2016-05-28 12:38:37         1         0.1           73.5
## 736  2016-05-28 20:41:50         1         0.1           73.6
## 737  2016-05-29 07:29:27         1         0.1           73.7
## 738  2016-05-29 18:12:00         1         0.1           73.8
## 739  2016-05-29 21:17:10         1         0.1           73.9
## 740  2016-05-30 02:34:25         1         0.1           74.0
## 741  2016-05-30 07:36:31         1         0.1           74.1
## 742  2016-05-30 08:02:27         1         0.1           74.2
## 743  2016-05-30 08:02:35         1         0.1           74.3
## 744  2016-05-30 08:35:54         1         0.1           74.4
## 745  2016-05-30 18:08:19         1         0.1           74.5
## 746  2016-05-30 20:07:59         1         0.1           74.6
## 747  2016-05-30 20:08:51         1         0.1           74.7
## 748  2016-05-30 21:22:22         1         0.1           74.8
## 749  2016-05-31 00:58:37         1         0.1           74.9
## 750  2016-05-31 02:17:18         1         0.1           75.0
## 751  2016-05-31 06:21:02         1         0.1           75.1
## 752  2016-05-31 09:06:29         1         0.1           75.2
## 753  2016-05-31 11:44:45         1         0.1           75.3
## 754  2016-05-31 17:50:15         1         0.1           75.4
## 755  2016-05-31 21:41:46         1         0.1           75.5
## 756  2016-05-31 23:32:00         1         0.1           75.6
## 757  2016-05-31 23:42:26         1         0.1           75.7
## 758  2016-06-01 03:17:50         1         0.1           75.8
## 759  2016-06-01 03:44:42         1         0.1           75.9
## 760  2016-06-01 09:27:34         1         0.1           76.0
## 761  2016-06-01 12:27:17         1         0.1           76.1
## 762  2016-06-01 16:10:30         1         0.1           76.2
## 763  2016-06-02 04:14:37         1         0.1           76.3
## 764  2016-06-02 21:02:22         1         0.1           76.4
## 765  2016-06-02 22:16:08         1         0.1           76.5
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## 766  2016-06-03 00:55:23         1         0.1           76.6
## 767  2016-06-03 01:14:41         1         0.1           76.7
## 768  2016-06-03 03:36:18         1         0.1           76.8
## 769  2016-06-03 04:51:46         1         0.1           76.9
## 770  2016-06-03 06:34:44         1         0.1           77.0
## 771  2016-06-03 07:00:36         1         0.1           77.1
## 772  2016-06-03 17:32:47         1         0.1           77.2
## 773  2016-06-03 21:43:21         1         0.1           77.3
## 774  2016-06-04 09:13:29         1         0.1           77.4
## 775  2016-06-04 09:25:27         1         0.1           77.5
## 776  2016-06-04 17:24:07         1         0.1           77.6
## 777  2016-06-05 00:29:13         1         0.1           77.7
## 778  2016-06-05 07:54:30         1         0.1           77.8
## 779  2016-06-05 13:16:24         1         0.1           77.9
## 780  2016-06-05 21:38:22         1         0.1           78.0
## 781  2016-06-05 22:11:34         1         0.1           78.1
## 782  2016-06-06 21:26:51         1         0.1           78.2
## 783  2016-06-06 22:41:24         1         0.1           78.3
## 784  2016-06-07 01:29:06         1         0.1           78.4
## 785  2016-06-07 05:41:16         1         0.1           78.5
## 786  2016-06-07 23:46:51         1         0.1           78.6
## 787  2016-06-08 12:25:49         1         0.1           78.7
## 788  2016-06-08 18:54:01         1         0.1           78.8
## 789  2016-06-08 20:13:27         1         0.1           78.9
## 790  2016-06-09 14:24:06         1         0.1           79.0
## 791  2016-06-09 17:11:02         1         0.1           79.1
## 792  2016-06-09 19:32:27         1         0.1           79.2
## 793  2016-06-09 21:43:05         1         0.1           79.3
## 794  2016-06-10 00:35:15         1         0.1           79.4
## 795  2016-06-10 03:56:41         1         0.1           79.5
## 796  2016-06-10 04:21:57         1         0.1           79.6
## 797  2016-06-10 10:11:00         1         0.1           79.7
## 798  2016-06-10 11:31:33         1         0.1           79.8
## 799  2016-06-10 22:21:10         1         0.1           79.9
## 800  2016-06-11 06:47:55         1         0.1           80.0
## 801  2016-06-11 08:38:16         1         0.1           80.1
## 802  2016-06-11 09:37:52         1         0.1           80.2
## 803  2016-06-11 18:32:12         1         0.1           80.3
## 804  2016-06-12 03:11:04         1         0.1           80.4
## 805  2016-06-12 05:31:19         1         0.1           80.5
## 806  2016-06-12 11:17:25         1         0.1           80.6
## 807  2016-06-12 15:25:44         1         0.1           80.7
## 808  2016-06-12 17:52:43         1         0.1           80.8
## 809  2016-06-12 21:21:53         1         0.1           80.9
## 810  2016-06-13 06:11:33         1         0.1           81.0
## 811  2016-06-13 11:06:40         1         0.1           81.1
## 812  2016-06-13 13:59:51         1         0.1           81.2
## 813  2016-06-13 17:27:09         1         0.1           81.3
## 814  2016-06-13 18:50:00         1         0.1           81.4
## 815  2016-06-13 22:41:45         1         0.1           81.5
## 816  2016-06-14 07:02:09         1         0.1           81.6
## 817  2016-06-14 11:59:58         1         0.1           81.7
## 818  2016-06-14 12:08:10         1         0.1           81.8
## 819  2016-06-14 19:48:34         1         0.1           81.9
```

```
## 820  2016-06-15 05:30:13         1         0.1           82.0
## 821  2016-06-15 05:43:02         1         0.1           82.1
## 822  2016-06-15 11:56:41         1         0.1           82.2
## 823  2016-06-16 02:01:24         1         0.1           82.3
## 824  2016-06-16 02:33:22         1         0.1           82.4
## 825  2016-06-16 03:17:45         1         0.1           82.5
## 826  2016-06-16 18:04:51         1         0.1           82.6
## 827  2016-06-16 20:24:33         1         0.1           82.7
## 828  2016-06-17 03:02:55         1         0.1           82.8
## 829  2016-06-17 03:23:13         1         0.1           82.9
## 830  2016-06-17 09:38:22         1         0.1           83.0
## 831  2016-06-17 09:58:46         1         0.1           83.1
## 832  2016-06-17 17:11:16         1         0.1           83.2
## 833  2016-06-17 20:18:27         1         0.1           83.3
## 834  2016-06-17 23:19:38         1         0.1           83.4
## 835  2016-06-18 01:42:37         1         0.1           83.5
## 836  2016-06-18 05:17:33         1         0.1           83.6
## 837  2016-06-18 16:02:34         1         0.1           83.7
## 838  2016-06-18 16:32:58         1         0.1           83.8
## 839  2016-06-18 17:23:26         1         0.1           83.9
## 840  2016-06-18 17:56:32         1         0.1           84.0
## 841  2016-06-18 19:10:14         1         0.1           84.1
## 842  2016-06-18 22:31:22         1         0.1           84.2
## 843  2016-06-19 03:19:44         1         0.1           84.3
## 844  2016-06-19 09:24:35         1         0.1           84.4
## 845  2016-06-19 18:19:38         1         0.1           84.5
## 846  2016-06-19 22:08:15         1         0.1           84.6
## 847  2016-06-19 22:26:16         1         0.1           84.7
## 848  2016-06-19 23:04:45         1         0.1           84.8
## 849  2016-06-19 23:21:38         1         0.1           84.9
## 850  2016-06-20 02:25:12         1         0.1           85.0
## 851  2016-06-20 04:24:41         1         0.1           85.1
## 852  2016-06-20 06:30:06         1         0.1           85.2
## 853  2016-06-20 08:22:09         1         0.1           85.3
## 854  2016-06-20 08:34:46         1         0.1           85.4
## 855  2016-06-20 09:35:02         1         0.1           85.5
## 856  2016-06-20 14:20:52         1         0.1           85.6
## 857  2016-06-21 00:52:47         1         0.1           85.7
## 858  2016-06-21 03:14:41         1         0.1           85.8
## 859  2016-06-21 13:15:21         1         0.1           85.9
## 860  2016-06-21 14:32:32         1         0.1           86.0
## 861  2016-06-22 05:22:58         1         0.1           86.1
## 862  2016-06-22 07:33:21         1         0.1           86.2
## 863  2016-06-22 17:19:09         1         0.1           86.3
## 864  2016-06-23 00:16:02         1         0.1           86.4
## 865  2016-06-23 01:22:43         1         0.1           86.5
## 866  2016-06-23 11:05:01         1         0.1           86.6
## 867  2016-06-24 05:50:22         1         0.1           86.7
## 868  2016-06-24 08:42:20         1         0.1           86.8
## 869  2016-06-24 21:09:58         1         0.1           86.9
## 870  2016-06-25 00:33:23         1         0.1           87.0
## 871  2016-06-25 04:21:33         1         0.1           87.1
## 872  2016-06-25 17:33:35         1         0.1           87.2
## 873  2016-06-25 18:17:53         1         0.1           87.3
```

```
## 874  2016-06-26 02:06:59         1         0.1            87.4
## 875  2016-06-26 02:34:15         1         0.1            87.5
## 876  2016-06-26 04:22:26         1         0.1            87.6
## 877  2016-06-26 07:01:47         1         0.1            87.7
## 878  2016-06-26 11:52:18         1         0.1            87.8
## 879  2016-06-26 17:16:26         1         0.1            87.9
## 880  2016-06-26 17:25:55         1         0.1            88.0
## 881  2016-06-27 01:56:36         1         0.1            88.1
## 882  2016-06-27 18:37:04         1         0.1            88.2
## 883  2016-06-27 21:51:47         1         0.1            88.3
## 884  2016-06-28 09:19:06         1         0.1            88.4
## 885  2016-06-28 12:51:02         1         0.1            88.5
## 886  2016-06-28 20:13:41         1         0.1            88.6
## 887  2016-06-29 01:19:21         1         0.1            88.7
## 888  2016-06-29 02:43:29         1         0.1            88.8
## 889  2016-06-29 02:48:44         1         0.1            88.9
## 890  2016-06-29 03:07:51         1         0.1            89.0
## 891  2016-06-29 04:23:10         1         0.1            89.1
## 892  2016-06-29 07:20:46         1         0.1            89.2
## 893  2016-06-29 09:04:31         1         0.1            89.3
## 894  2016-06-29 10:50:45         1         0.1            89.4
## 895  2016-06-29 13:35:05         1         0.1            89.5
## 896  2016-06-29 21:39:42         1         0.1            89.6
## 897  2016-06-30 00:19:33         1         0.1            89.7
## 898  2016-06-30 00:40:31         1         0.1            89.8
## 899  2016-06-30 00:43:40         1         0.1            89.9
## 900  2016-07-01 01:12:04         1         0.1            90.0
## 901  2016-07-01 04:41:57         1         0.1            90.1
## 902  2016-07-02 00:24:22         1         0.1            90.2
## 903  2016-07-02 14:57:53         1         0.1            90.3
## 904  2016-07-02 20:23:15         1         0.1            90.4
## 905  2016-07-02 21:22:23         1         0.1            90.5
## 906  2016-07-03 04:11:40         1         0.1            90.6
## 907  2016-07-03 04:33:41         1         0.1            90.7
## 908  2016-07-03 09:22:30         1         0.1            90.8
## 909  2016-07-03 12:57:03         1         0.1            90.9
## 910  2016-07-03 22:13:19         1         0.1            91.0
## 911  2016-07-04 11:03:49         1         0.1            91.1
## 912  2016-07-04 23:17:47         1         0.1            91.2
## 913  2016-07-05 00:54:11         1         0.1            91.3
## 914  2016-07-05 15:14:10         1         0.1            91.4
## 915  2016-07-05 17:17:49         1         0.1            91.5
## 916  2016-07-05 18:59:45         1         0.1            91.6
## 917  2016-07-05 20:16:13         1         0.1            91.7
## 918  2016-07-05 22:33:48         1         0.1            91.8
## 919  2016-07-06 03:40:17         1         0.1            91.9
## 920  2016-07-06 05:34:52         1         0.1            92.0
## 921  2016-07-06 12:04:29         1         0.1            92.1
## 922  2016-07-06 15:56:39         1         0.1            92.2
## 923  2016-07-06 16:00:33         1         0.1            92.3
## 924  2016-07-06 18:36:01         1         0.1            92.4
## 925  2016-07-06 23:09:07         1         0.1            92.5
## 926  2016-07-07 03:55:01         1         0.1            92.6
## 927  2016-07-07 12:17:33         1         0.1            92.7
```

```
## 928  2016-07-07 13:37:34         1         0.1           92.8
## 929  2016-07-07 18:07:19         1         0.1           92.9
## 930  2016-07-07 23:32:38         1         0.1           93.0
## 931  2016-07-08 03:47:41         1         0.1           93.1
## 932  2016-07-08 17:14:01         1         0.1           93.2
## 933  2016-07-08 21:18:32         1         0.1           93.3
## 934  2016-07-08 22:30:10         1         0.1           93.4
## 935  2016-07-09 11:04:54         1         0.1           93.5
## 936  2016-07-09 11:18:02         1         0.1           93.6
## 937  2016-07-09 14:55:36         1         0.1           93.7
## 938  2016-07-09 16:23:33         1         0.1           93.8
## 939  2016-07-10 16:25:56         1         0.1           93.9
## 940  2016-07-10 17:24:51         1         0.1           94.0
## 941  2016-07-10 19:15:52         1         0.1           94.1
## 942  2016-07-11 01:42:51         1         0.1           94.2
## 943  2016-07-11 09:32:53         1         0.1           94.3
## 944  2016-07-11 13:23:37         1         0.1           94.4
## 945  2016-07-11 15:45:23         1         0.1           94.5
## 946  2016-07-11 18:12:43         1         0.1           94.6
## 947  2016-07-12 10:56:21         1         0.1           94.7
## 948  2016-07-13 01:48:46         1         0.1           94.8
## 949  2016-07-13 04:10:53         1         0.1           94.9
## 950  2016-07-13 07:41:42         1         0.1           95.0
## 951  2016-07-13 11:41:29         1         0.1           95.1
## 952  2016-07-13 14:05:22         1         0.1           95.2
## 953  2016-07-13 14:30:14         1         0.1           95.3
## 954  2016-07-13 16:12:24         1         0.1           95.4
## 955  2016-07-13 21:31:14         1         0.1           95.5
## 956  2016-07-14 12:07:10         1         0.1           95.6
## 957  2016-07-14 22:43:29         1         0.1           95.7
## 958  2016-07-15 05:05:14         1         0.1           95.8
## 959  2016-07-15 09:08:42         1         0.1           95.9
## 960  2016-07-15 09:42:19         1         0.1           96.0
## 961  2016-07-15 15:43:36         1         0.1           96.1
## 962  2016-07-16 05:56:42         1         0.1           96.2
## 963  2016-07-16 10:14:04         1         0.1           96.3
## 964  2016-07-16 14:13:54         1         0.1           96.4
## 965  2016-07-16 23:08:54         1         0.1           96.5
## 966  2016-07-17 01:13:56         1         0.1           96.6
## 967  2016-07-17 01:58:53         1         0.1           96.7
## 968  2016-07-17 13:22:43         1         0.1           96.8
## 969  2016-07-17 14:26:04         1         0.1           96.9
## 970  2016-07-17 18:55:38         1         0.1           97.0
## 971  2016-07-17 22:04:54         1         0.1           97.1
## 972  2016-07-18 01:36:37         1         0.1           97.2
## 973  2016-07-18 02:51:19         1         0.1           97.3
## 974  2016-07-18 04:53:22         1         0.1           97.4
## 975  2016-07-18 11:33:31         1         0.1           97.5
## 976  2016-07-18 18:33:05         1         0.1           97.6
## 977  2016-07-19 07:59:18         1         0.1           97.7
## 978  2016-07-19 08:32:10         1         0.1           97.8
## 979  2016-07-19 12:05:58         1         0.1           97.9
## 980  2016-07-19 18:06:22         1         0.1           98.0
## 981  2016-07-20 01:56:33         1         0.1           98.1
```

```
## 982  2016-07-20 09:27:24         1        0.1            98.2
## 983  2016-07-20 13:21:37         1        0.1            98.3
## 984  2016-07-20 21:53:42         1        0.1            98.4
## 985  2016-07-20 23:08:28         1        0.1            98.5
## 986  2016-07-21 10:01:50         1        0.1            98.6
## 987  2016-07-21 10:54:35         1        0.1            98.7
## 988  2016-07-21 16:02:40         1        0.1            98.8
## 989  2016-07-21 20:30:06         1        0.1            98.9
## 990  2016-07-21 21:16:35         1        0.1            99.0
## 991  2016-07-21 23:14:35         1        0.1            99.1
## 992  2016-07-22 07:44:43         1        0.1            99.2
## 993  2016-07-22 11:05:10         1        0.1            99.3
## 994  2016-07-23 04:04:42         1        0.1            99.4
## 995  2016-07-23 04:37:05         1        0.1            99.5
## 996  2016-07-23 05:21:39         1        0.1            99.6
## 997  2016-07-23 06:18:51         1        0.1            99.7
## 998  2016-07-23 11:46:28         1        0.1            99.8
## 999  2016-07-23 14:47:23         1        0.1            99.9
## 1000 2016-07-24 00:22:16         1        0.1           100.0
```

```
freq(data=data$Country)
```

```
## Warning in freq_logic(data = data, input = input, plot, na.rm, path_out =
## path_out): Skipping plot for variable 'var' (more than 100 categories)
```

```
##                                                 var frequency percentage
## 1                                    Czech Republic         9        0.9
## 2                                            France         9        0.9
## 3                                       Afghanistan         8        0.8
## 4                                         Australia         8        0.8
## 5                                            Cyprus         8        0.8
## 6                                            Greece         8        0.8
## 7                                           Liberia         8        0.8
## 8                                         Micronesia         8        0.8
## 9                                              Peru         8        0.8
## 10                                          Senegal         8        0.8
## 11                                     South Africa         8        0.8
## 12                                           Turkey         8        0.8
## 13                                          Albania         7        0.7
## 14                                          Bahamas         7        0.7
## 15                            Bosnia and Herzegovina         7        0.7
## 16                                          Burundi         7        0.7
## 17                                         Cambodia         7        0.7
## 18                                          Eritrea         7        0.7
## 19                                         Ethiopia         7        0.7
## 20                                             Fiji         7        0.7
## 21                                       Luxembourg         7        0.7
## 22                                           Taiwan         7        0.7
## 23                                        Venezuela         7        0.7
## 24                                   Western Sahara         7        0.7
## 25                                          Algeria         6        0.6
## 26                                         Anguilla         6        0.6
## 27                                          Belarus         6        0.6
```

```
## 28                                  Bolivia         6         0.6
## 29                                 Bulgaria         6         0.6
## 30                                    China         6         0.6
## 31                        Christmas Island         6         0.6
## 32                               Costa Rica         6         0.6
## 33                                  Croatia         6         0.6
## 34                              El Salvador         6         0.6
## 35                                    Gabon         6         0.6
## 36                                Hong Kong         6         0.6
## 37                                  Hungary         6         0.6
## 38                                Indonesia         6         0.6
## 39                                   Jersey         6         0.6
## 40                           Kyrgyz Republic         6         0.6
## 41                                  Lebanon         6         0.6
## 42                            Liechtenstein         6         0.6
## 43                               Madagascar         6         0.6
## 44                                    Malta         6         0.6
## 45                                  Mayotte         6         0.6
## 46                                   Mexico         6         0.6
## 47                                  Moldova         6         0.6
## 48                                 Mongolia         6         0.6
## 49                      Netherlands Antilles         6         0.6
## 50                              Philippines         6         0.6
## 51                                   Poland         6         0.6
## 52                              Puerto Rico         6         0.6
## 53                                    Qatar         6         0.6
## 54  Saint Vincent and the Grenadines         6         0.6
## 55                                    Samoa         6         0.6
## 56                                Singapore         6         0.6
## 57    Svalbard & Jan Mayen Islands          6         0.6
## 58                             Turkmenistan         6         0.6
## 59                     United Arab Emirates         6         0.6
## 60                                  Vanuatu         6         0.6
## 61                                 Zimbabwe         6         0.6
## 62                           American Samoa         5         0.5
## 63                        Antigua and Barbuda         5         0.5
## 64                                  Austria         5         0.5
## 65                                  Bahrain         5         0.5
## 66                                 Barbados         5         0.5
## 67                                  Belgium         5         0.5
## 68                                   Belize         5         0.5
## 69          Bouvet Island (Bouvetoya)         5         0.5
## 70                                   Brazil         5         0.5
## 71                        Brunei Darussalam         5         0.5
## 72                                 Cameroon         5         0.5
## 73                                   Canada         5         0.5
## 74                             Cayman Islands         5         0.5
## 75                                     Cuba         5         0.5
## 76                                 Dominica         5         0.5
## 77                                  Ecuador         5         0.5
## 78                                    Egypt         5         0.5
## 79                                  Finland         5         0.5
## 80                           French Polynesia         5         0.5
## 81                 French Southern Territories         5         0.5
```

```
## 82                                  Greenland        5       0.5
## 83                                     Guyana        5       0.5
## 84                                   Honduras        5       0.5
## 85                                       Iran        5       0.5
## 86                                      Italy        5       0.5
## 87                                    Jamaica        5       0.5
## 88                                      Korea        5       0.5
## 89                                    Myanmar        5       0.5
## 90                             Norfolk Island        5       0.5
## 91                                   Pakistan        5       0.5
## 92                          Papua New Guinea        5       0.5
## 93                                     Rwanda        5       0.5
## 94                             Saint Helena        5       0.5
## 95                  Saint Pierre and Miquelon        5       0.5
## 96                                     Serbia        5       0.5
## 97                                    Somalia        5       0.5
## 98                                Timor-Leste        5       0.5
## 99                                      Tonga        5       0.5
## 100                 Turks and Caicos Islands        5       0.5
## 101                                   Ukraine        5       0.5
## 102                 United States of America        5       0.5
## 103                                   Uruguay        5       0.5
## 104                                    Angola        4       0.4
## 105                                Bangladesh        4       0.4
## 106                              Burkina Faso        4       0.4
## 107                                      Chad        4       0.4
## 108                                     Chile        4       0.4
## 109                                     Congo        4       0.4
## 110                           Cote d'Ivoire        4       0.4
## 111                       Dominican Republic        4       0.4
## 112                        Equatorial Guinea        4       0.4
## 113            Falkland Islands (Malvinas)        4       0.4
## 114                          French Guiana        4       0.4
## 115                                Georgia        4       0.4
## 116                                  Ghana        4       0.4
## 117                                Grenada        4       0.4
## 118                                   Guam        4       0.4
## 119                              Guatemala        4       0.4
## 120                                 Israel        4       0.4
## 121                                  Japan        4       0.4
## 122                             Kazakhstan        4       0.4
## 123                                  Kenya        4       0.4
## 124 Lao People's Democratic Republic        4       0.4
## 125                                 Latvia        4       0.4
## 126            Libyan Arab Jamahiriya        4       0.4
## 127                                 Malawi        4       0.4
## 128                               Maldives        4       0.4
## 129                                   Mali        4       0.4
## 130                              Martinique        4       0.4
## 131                               Mauritius        4       0.4
## 132                             Netherlands        4       0.4
## 133                             New Zealand        4       0.4
## 134                                   Palau        4       0.4
## 135                             Saint Martin        4       0.4
```

```
## 136                                    Saudi Arabia        4        0.4
## 137                                       Sri Lanka        4        0.4
## 138                                          Sweden        4        0.4
## 139                                     Switzerland        4        0.4
## 140                                        Thailand        4        0.4
## 141                                         Tokelau        4        0.4
## 142                                         Tunisia        4        0.4
## 143                                          Tuvalu        4        0.4
## 144                                          Uganda        4        0.4
## 145          United States Minor Outlying Islands        4        0.4
## 146                 United States Virgin Islands        4        0.4
## 147                             Wallis and Futuna        4        0.4
## 148                                          Zambia        4        0.4
## 149  Antarctica (the territory South of 60 deg S)        3        0.3
## 150                                         Armenia        3        0.3
## 151                                      Azerbaijan        3        0.3
## 152                        British Virgin Islands        3        0.3
## 153                                    Cook Islands        3        0.3
## 154                                         Denmark        3        0.3
## 155                                         Estonia        3        0.3
## 156                                   Faroe Islands        3        0.3
## 157                                       Gibraltar        3        0.3
## 158                                        Guernsey        3        0.3
## 159                                          Guinea        3        0.3
## 160           Heard Island and McDonald Islands        3        0.3
## 161               Holy See (Vatican City State)        3        0.3
## 162                                         Iceland        3        0.3
## 163                                         Ireland        3        0.3
## 164                                       Isle of Man        3        0.3
## 165                                       Lithuania        3        0.3
## 166                                           Macao        3        0.3
## 167                                        Malaysia        3        0.3
## 168                                          Monaco        3        0.3
## 169                                         Morocco        3        0.3
## 170                                           Nauru        3        0.3
## 171                                           Nepal        3        0.3
## 172                                       Nicaragua        3        0.3
## 173                                           Niger        3        0.3
## 174                                            Niue        3        0.3
## 175                    Northern Mariana Islands        3        0.3
## 176                       Palestinian Territory        3        0.3
## 177                                        Paraguay        3        0.3
## 178                                        Portugal        3        0.3
## 179                          Russian Federation        3        0.3
## 180                                       San Marino        3        0.3
## 181                                       Seychelles        3        0.3
## 182                                           Spain        3        0.3
## 183                         Syrian Arab Republic        3        0.3
## 184                                      Tajikistan        3        0.3
## 185                                        Tanzania        3        0.3
## 186                                            Togo        3        0.3
## 187                         Trinidad and Tobago        3        0.3
## 188                              United Kingdom        3        0.3
## 189                                         Vietnam        3        0.3
```

```
## 190                                          Yemen         3        0.3
## 191                                        Andorra         2        0.2
## 192                                      Argentina         2        0.2
## 193                                          Benin         2        0.2
## 194                                         Bhutan         2        0.2
## 195                          Central African Republic         2        0.2
## 196                                       Colombia         2        0.2
## 197                                        Comoros         2        0.2
## 198                                       Djibouti         2        0.2
## 199                                         Gambia         2        0.2
## 200                                      Guadeloupe         2        0.2
## 201                                    Guinea-Bissau         2        0.2
## 202                                          Haiti         2        0.2
## 203                                          India         2        0.2
## 204                                         Kuwait         2        0.2
## 205                                       Macedonia         2        0.2
## 206                                      Mauritania         2        0.2
## 207                                      Montenegro         2        0.2
## 208                                         Namibia         2        0.2
## 209                                    New Caledonia         2        0.2
## 210                                          Norway         2        0.2
## 211                                          Panama         2        0.2
## 212                                  Pitcairn Islands         2        0.2
## 213                                          Reunion         2        0.2
## 214                                 Saint Barthelemy         2        0.2
## 215                                      Saint Lucia         2        0.2
## 216                          Sao Tome and Principe         2        0.2
## 217                                     Sierra Leone         2        0.2
## 218                  Slovakia (Slovak Republic)         2        0.2
## 219 South Georgia and the South Sandwich Islands         2        0.2
## 220                                           Sudan         2        0.2
## 221                                        Suriname         2        0.2
## 222                                       Swaziland         2        0.2
## 223                                      Uzbekistan         2        0.2
## 224                                           Aruba         1        0.1
## 225                                         Bermuda         1        0.1
## 226 British Indian Ocean Territory (Chagos Archipelago)         1        0.1
## 227                                      Cape Verde         1        0.1
## 228                                         Germany         1        0.1
## 229                                          Jordan         1        0.1
## 230                                        Kiribati         1        0.1
## 231                                         Lesotho         1        0.1
## 232                                 Marshall Islands         1        0.1
## 233                                       Montserrat         1        0.1
## 234                                      Mozambique         1        0.1
## 235                                         Romania         1        0.1
## 236                           Saint Kitts and Nevis         1        0.1
## 237                                        Slovenia         1        0.1
##     cumulative_perc
## 1               0.9
## 2               1.8
## 3               2.6
## 4               3.4
## 5               4.2
```

```
## 6              5.0
## 7              5.8
## 8              6.6
## 9              7.4
## 10             8.2
## 11             9.0
## 12             9.8
## 13            10.5
## 14            11.2
## 15            11.9
## 16            12.6
## 17            13.3
## 18            14.0
## 19            14.7
## 20            15.4
## 21            16.1
## 22            16.8
## 23            17.5
## 24            18.2
## 25            18.8
## 26            19.4
## 27            20.0
## 28            20.6
## 29            21.2
## 30            21.8
## 31            22.4
## 32            23.0
## 33            23.6
## 34            24.2
## 35            24.8
## 36            25.4
## 37            26.0
## 38            26.6
## 39            27.2
## 40            27.8
## 41            28.4
## 42            29.0
## 43            29.6
## 44            30.2
## 45            30.8
## 46            31.4
## 47            32.0
## 48            32.6
## 49            33.2
## 50            33.8
## 51            34.4
## 52            35.0
## 53            35.6
## 54            36.2
## 55            36.8
## 56            37.4
## 57            38.0
## 58            38.6
## 59            39.2
```

```
## 60            39.8
## 61            40.4
## 62            40.9
## 63            41.4
## 64            41.9
## 65            42.4
## 66            42.9
## 67            43.4
## 68            43.9
## 69            44.4
## 70            44.9
## 71            45.4
## 72            45.9
## 73            46.4
## 74            46.9
## 75            47.4
## 76            47.9
## 77            48.4
## 78            48.9
## 79            49.4
## 80            49.9
## 81            50.4
## 82            50.9
## 83            51.4
## 84            51.9
## 85            52.4
## 86            52.9
## 87            53.4
## 88            53.9
## 89            54.4
## 90            54.9
## 91            55.4
## 92            55.9
## 93            56.4
## 94            56.9
## 95            57.4
## 96            57.9
## 97            58.4
## 98            58.9
## 99            59.4
## 100           59.9
## 101           60.4
## 102           60.9
## 103           61.4
## 104           61.8
## 105           62.2
## 106           62.6
## 107           63.0
## 108           63.4
## 109           63.8
## 110           64.2
## 111           64.6
## 112           65.0
## 113           65.4
```

```
## 114          65.8
## 115          66.2
## 116          66.6
## 117          67.0
## 118          67.4
## 119          67.8
## 120          68.2
## 121          68.6
## 122          69.0
## 123          69.4
## 124          69.8
## 125          70.2
## 126          70.6
## 127          71.0
## 128          71.4
## 129          71.8
## 130          72.2
## 131          72.6
## 132          73.0
## 133          73.4
## 134          73.8
## 135          74.2
## 136          74.6
## 137          75.0
## 138          75.4
## 139          75.8
## 140          76.2
## 141          76.6
## 142          77.0
## 143          77.4
## 144          77.8
## 145          78.2
## 146          78.6
## 147          79.0
## 148          79.4
## 149          79.7
## 150          80.0
## 151          80.3
## 152          80.6
## 153          80.9
## 154          81.2
## 155          81.5
## 156          81.8
## 157          82.1
## 158          82.4
## 159          82.7
## 160          83.0
## 161          83.3
## 162          83.6
## 163          83.9
## 164          84.2
## 165          84.5
## 166          84.8
## 167          85.1
```

```
## 168          85.4
## 169          85.7
## 170          86.0
## 171          86.3
## 172          86.6
## 173          86.9
## 174          87.2
## 175          87.5
## 176          87.8
## 177          88.1
## 178          88.4
## 179          88.7
## 180          89.0
## 181          89.3
## 182          89.6
## 183          89.9
## 184          90.2
## 185          90.5
## 186          90.8
## 187          91.1
## 188          91.4
## 189          91.7
## 190          92.0
## 191          92.2
## 192          92.4
## 193          92.6
## 194          92.8
## 195          93.0
## 196          93.2
## 197          93.4
## 198          93.6
## 199          93.8
## 200          94.0
## 201          94.2
## 202          94.4
## 203          94.6
## 204          94.8
## 205          95.0
## 206          95.2
## 207          95.4
## 208          95.6
## 209          95.8
## 210          96.0
## 211          96.2
## 212          96.4
## 213          96.6
## 214          96.8
## 215          97.0
## 216          97.2
## 217          97.4
## 218          97.6
## 219          97.8
## 220          98.0
## 221          98.2
```

```
## 222            98.4
## 223            98.6
## 224            98.7
## 225            98.8
## 226            98.9
## 227            99.0
## 228            99.1
## 229            99.2
## 230            99.3
## 231            99.4
## 232            99.5
## 233            99.6
## 234            99.7
## 235            99.8
## 236            99.9
## 237           100.0
```

Most users were from Czetch Republic and France.

```
freq(data=data$City)
```

```
## Warning in freq_logic(data = data, input = input, plot, na.rm, path_out =
## path_out): Skipping plot for variable 'var' (more than 100 categories)
```

```
##                         var frequency percentage cumulative_perc
## 1                 Lisamouth         3        0.3             0.3
## 2              Williamsport         3        0.3             0.6
## 3           Benjaminchester         2        0.2             0.8
## 4                 East John         2        0.2             1.0
## 5              East Timothy         2        0.2             1.2
## 6                  Johnstad         2        0.2             1.4
## 7                  Joneston         2        0.2             1.6
## 8                Lake David         2        0.2             1.8
## 9                Lake James         2        0.2             2.0
## 10                Lake Jose         2        0.2             2.2
## 11             Lake Patrick         2        0.2             2.4
## 12               Lake Susan         2        0.2             2.6
## 13             Michelleside         2        0.2             2.8
## 14               Millerbury         2        0.2             3.0
## 15               Millertown         2        0.2             3.2
## 16          New Jessicaport         2        0.2             3.4
## 17                New Sheila         2        0.2             3.6
## 18             North Daniel         2        0.2             3.8
## 19              Pamelamouth         2        0.2             4.0
## 20                Port Jason         2        0.2             4.2
## 21                 Port Juan         2        0.2             4.4
## 22                Port Julie         2        0.2             4.6
## 23                Robertfurt         2        0.2             4.8
## 24                Shelbyport         2        0.2             5.0
## 25                South Lisa         2        0.2             5.2
## 26               West Amanda         2        0.2             5.4
## 27             West Shannon         2        0.2             5.6
## 28              West Steven         2        0.2             5.8
```

```
## 29              Wrightburgh        2        0.2            6.0
## 30                Adamsbury        1        0.1            6.1
## 31                 Adamside        1        0.1            6.2
## 32                Adamsstad        1        0.1            6.3
## 33                 Alanview        1        0.1            6.4
## 34            Alexanderfurt        1        0.1            6.5
## 35            Alexanderview        1        0.1            6.6
## 36            Alexandrafort        1        0.1            6.7
## 37               Alexisland        1        0.1            6.8
## 38               Aliciatown        1        0.1            6.9
## 39             Alvaradoport        1        0.1            7.0
## 40              Alvarezland        1        0.1            7.1
## 41              Amandafort        1        0.1            7.2
## 42             Amandahaven        1        0.1            7.3
## 43              Amandaland        1        0.1            7.4
## 44                 Amyfurt        1        0.1            7.5
## 45                Amyhaven        1        0.1            7.6
## 46          Andersonchester        1        0.1            7.7
## 47             Andersonfurt        1        0.1            7.8
## 48              Andersonton        1        0.1            7.9
## 49            Andrewborough        1        0.1            8.0
## 50              Andrewmouth        1        0.1            8.1
## 51              Angelhaven        1        0.1            8.2
## 52              Anthonyfurt        1        0.1            8.3
## 53            Ashleychester        1        0.1            8.4
## 54              Ashleymouth        1        0.1            8.5
## 55            Austinborough        1        0.1            8.6
## 56               Austinland        1        0.1            8.7
## 57              Bakerhaven        1        0.1            8.8
## 58              Barbershire        1        0.1            8.9
## 59                  Beckton        1        0.1            9.0
## 60              Bernardton        1        0.1            9.1
## 61                Bethburgh        1        0.1            9.2
## 62                Birdshire        1        0.1            9.3
## 63            Blairborough        1        0.1            9.4
## 64              Blairville        1        0.1            9.5
## 65              Blevinstown        1        0.1            9.6
## 66                Bowenview        1        0.1            9.7
## 67                Boyerberg        1        0.1            9.8
## 68          Bradleyborough        1        0.1            9.9
## 69            Bradleyburgh        1        0.1           10.0
## 70               Bradleyside        1        0.1           10.1
## 71          Bradshawborough        1        0.1           10.2
## 72                Bradyfurt        1        0.1           10.3
## 73               Brandiland        1        0.1           10.4
## 74              Brandonbury        1        0.1           10.5
## 75              Brandonstad        1        0.1           10.6
## 76              Brandymouth        1        0.1           10.7
## 77              Brendaburgh        1        0.1           10.8
## 78            Brendachester        1        0.1           10.9
## 79               Brianabury        1        0.1           11.0
## 80                Brianfurt        1        0.1           11.1
## 81                Brianland        1        0.1           11.2
## 82          Brittanyborough        1        0.1           11.3
```

```
## 83               Brownbury         1        0.1            11.4
## 84               Brownport         1        0.1            11.5
## 85                Brownton         1        0.1            11.6
## 86               Browntown         1        0.1            11.7
## 87               Brownview         1        0.1            11.8
## 88              Bruceburgh         1        0.1            11.9
## 89             Burgessside         1        0.1            12.0
## 90              Butlerfort         1        0.1            12.1
## 91               Calebberg         1        0.1            12.2
## 92             Cameronberg         1        0.1            12.3
## 93            Campbellstad         1        0.1            12.4
## 94              Cannonbury         1        0.1            12.5
## 95             Carsonshire         1        0.1            12.6
## 96             Carterburgh         1        0.1            12.7
## 97              Carterland         1        0.1            12.8
## 98              Carterport         1        0.1            12.9
## 99               Carterton         1        0.1            13.0
## 100          Cassandratown         1        0.1            13.1
## 101          Catherinefort         1        0.1            13.2
## 102         Cervantesshire         1        0.1            13.3
## 103            Chapmanland         1        0.1            13.4
## 104           Chapmanmouth         1        0.1            13.5
## 105           Charlenetown         1        0.1            13.6
## 106            Charlesbury         1        0.1            13.7
## 107            Charlesport         1        0.1            13.8
## 108          Charlottefort         1        0.1            13.9
## 109             Chaseshire         1        0.1            14.0
## 110              Chrismouth         1        0.1            14.1
## 111         Christinehaven         1        0.1            14.2
## 112          Christinetown         1        0.1            14.3
## 113     Christopherchester         1        0.1            14.4
## 114        Christopherport         1        0.1            14.5
## 115       Christopherville         1        0.1            14.6
## 116           Clarkborough         1        0.1            14.7
## 117            Claytonside         1        0.1            14.8
## 118              Clineshire         1        0.1            14.9
## 119               Codyburgh         1        0.1            15.0
## 120              Coffeytown         1        0.1            15.1
## 121                Colebury         1        0.1            15.2
## 122           Colemanshire         1        0.1            15.3
## 123           Collinsburgh         1        0.1            15.4
## 124              Combsstad         1        0.1            15.5
## 125         Contrerasshire         1        0.1            15.6
## 126              Costaburgh         1        0.1            15.7
## 127           Courtneyfort         1        0.1            15.8
## 128                Coxhaven         1        0.1            15.9
## 129              Cranemouth         1        0.1            16.0
## 130            Crawfordfurt         1        0.1            16.1
## 131       Cunninghamhaven         1        0.1            16.2
## 132              Curtisport         1        0.1            16.3
## 133              Curtisview         1        0.1            16.4
## 134             Cynthiaside         1        0.1            16.5
## 135              Daisymouth         1        0.1            16.6
## 136              Danielview         1        0.1            16.7
```

```
## 137              Davidmouth         1         0.1            16.8
## 138               Davidside         1         0.1            16.9
## 139               Davidstad         1         0.1            17.0
## 140                Davidton         1         0.1            17.1
## 141               Davidview         1         0.1            17.2
## 142           Daviesborough         1         0.1            17.3
## 143             Davieshaven         1         0.1            17.4
## 144           Davilachester         1         0.1            17.5
## 145               Davisfurt         1         0.1            17.6
## 146                  Dayton         1         0.1            17.7
## 147             Deannaville         1         0.1            17.8
## 148             Debraburgh          1         0.1            17.9
## 149            Derrickhaven         1         0.1            18.0
## 150             Destinyfurt         1         0.1            18.1
## 151             Dianashire          1         0.1            18.2
## 152             Dianaville          1         0.1            18.3
## 153             Donaldshire         1         0.1            18.4
## 154             Douglasview         1         0.1            18.5
## 155               Duffystad         1         0.1            18.6
## 156           Dustinborough         1         0.1            18.7
## 157           Dustinchester         1         0.1            18.8
## 158             Dustinmouth         1         0.1            18.9
## 159              East Aaron         1         0.1            19.0
## 160            East Anthony         1         0.1            19.1
## 161            East Barbara         1         0.1            19.2
## 162      East Benjaminville         1         0.1            19.3
## 163        East Breannafurt         1         0.1            19.4
## 164           East Brettton         1         0.1            19.5
## 165          East Brianberg         1         0.1            19.6
## 166       East Brittanyville         1         0.1            19.7
## 167             East Carlos          1         0.1            19.8
## 168         East Christopher         1         0.1            19.9
## 169    East Christopherbury          1         0.1            20.0
## 170             East Connie          1         0.1            20.1
## 171               East Dana          1         0.1            20.2
## 172       East Deborahhaven          1         0.1            20.3
## 173       East Debraborough          1         0.1            20.4
## 174              East Donna          1         0.1            20.5
## 175          East Donnatown          1         0.1            20.6
## 176               East Eric          1         0.1            20.7
## 177            East Ericport         1         0.1            20.8
## 178          East Georgeside         1         0.1            20.9
## 179           East Graceland         1         0.1            21.0
## 180         East Heatherside         1         0.1            21.1
## 181               East Heidi         1         0.1            21.2
## 182               East Henry         1         0.1            21.3
## 183               East Jason         1         0.1            21.4
## 184            East Jennifer         1         0.1            21.5
## 185           East Jessefort         1         0.1            21.6
## 186            East Johnport         1         0.1            21.7
## 187           East Kevinbury         1         0.1            21.8
## 188             East Lindsey         1         0.1            21.9
## 189             East Maureen         1         0.1            22.0
## 190         East Michaelland         1         0.1            22.1
```

```
## 191       East Michaelmouth         1        0.1           22.2
## 192        East Michaeltown         1        0.1           22.3
## 193            East Michele         1        0.1           22.4
## 194       East Michelleberg         1        0.1           22.5
## 195              East Mike          1        0.1           22.6
## 196              East Paul          1        0.1           22.7
## 197        East Rachaelfurt         1        0.1           22.8
## 198         East Rachelview         1        0.1           22.9
## 199              East Ronald        1        0.1           23.0
## 200     East Samanthashire          1        0.1           23.1
## 201             East Sharon         1        0.1           23.2
## 202              East Shawn         1        0.1           23.3
## 203       East Shawnchester         1        0.1           23.4
## 204         East Sheriville         1        0.1           23.5
## 205            East Stephen         1        0.1           23.6
## 206          East Susanland         1        0.1           23.7
## 207             East Tammie         1        0.1           23.8
## 208       East Theresashire         1        0.1           23.9
## 209        East Tiffanyport         1        0.1           24.0
## 210        East Timothyport         1        0.1           24.1
## 211           East Toddfort         1        0.1           24.2
## 212          East Troyhaven         1        0.1           24.3
## 213         East Tylershire         1        0.1           24.4
## 214            East Valerie         1        0.1           24.5
## 215        East Vincentstad         1        0.1           24.6
## 216     East Yvonnechester          1        0.1           24.7
## 217             Edwardmouth         1        0.1           24.8
## 218            Edwardsmouth         1        0.1           24.9
## 219             Edwardsport         1        0.1           25.0
## 220           Elizabethbury         1        0.1           25.1
## 221          Elizabethmouth         1        0.1           25.2
## 222           Elizabethport         1        0.1           25.3
## 223           Elizabethstad         1        0.1           25.4
## 224               Emilyfurt         1        0.1           25.5
## 225           Ericksonmouth         1        0.1           25.6
## 226               Erikville         1        0.1           25.7
## 227               Erinmouth         1        0.1           25.8
## 228                 Erinton         1        0.1           25.9
## 229               Estesfurt         1        0.1           26.0
## 230             Estradafurt         1        0.1           26.1
## 231            Estradashire         1        0.1           26.2
## 232               Evansfurt         1        0.1           26.3
## 233              Evansville         1        0.1           26.4
## 234               Faithview         1        0.1           26.5
## 235              Florestown         1        0.1           26.6
## 236              Fosterside         1        0.1           26.7
## 237               Frankbury         1        0.1           26.8
## 238            Frankchester         1        0.1           26.9
## 239               Frankport         1        0.1           27.0
## 240            Fraziershire         1        0.1           27.1
## 241             Garciamouth         1        0.1           27.2
## 242              Garciaside         1        0.1           27.3
## 243              Garciatown         1        0.1           27.4
## 244              Garciaview         1        0.1           27.5
```

```
## 245              Garnerberg         1         0.1            27.6
## 246           Garrettborough        1         0.1            27.7
## 247              Garychester        1         0.1            27.8
## 248            Gilbertville         1         0.1            27.9
## 249              Gomezport          1         0.1            28.0
## 250           Gonzalezburgh         1         0.1            28.1
## 251              Grahamberg         1         0.1            28.2
## 252              Gravesport         1         0.1            28.3
## 253           Greenechester         1         0.1            28.4
## 254              Greentown          1         0.1            28.5
## 255              Greerport          1         0.1            28.6
## 256               Greerton          1         0.1            28.7
## 257              Greghaven          1         0.1            28.8
## 258              Guzmanland         1         0.1            28.9
## 259                Haleberg         1         0.1            29.0
## 260                Haleview         1         0.1            29.1
## 261                Hallfort         1         0.1            29.2
## 262            Hamiltonfort         1         0.1            29.3
## 263            Hammondport          1         0.1            29.4
## 264             Hannahside          1         0.1            29.5
## 265              Hannaport          1         0.1            29.6
## 266             Hansenland          1         0.1            29.7
## 267             Hansenmouth         1         0.1            29.8
## 268             Harmonhaven         1         0.1            29.9
## 269           Harperborough         1         0.1            30.0
## 270             Harrishaven         1         0.1            30.1
## 271           Harrisonmouth         1         0.1            30.2
## 272          Hartmanchester         1         0.1            30.3
## 273                Hartport         1         0.1            30.4
## 274              Harveyport         1         0.1            30.5
## 275           Hatfieldshire         1         0.1            30.6
## 276             Hawkinsbury         1         0.1            30.7
## 277              Hayesmouth         1         0.1            30.8
## 278             Heatherberg         1         0.1            30.9
## 279            Helenborough         1         0.1            31.0
## 280            Hendrixmouth         1         0.1            31.1
## 281              Henryfort          1         0.1            31.2
## 282              Henryland          1         0.1            31.3
## 283       Hernandezchester          1         0.1            31.4
## 284          Hernandezfort          1         0.1            31.5
## 285          Hernandezside          1         0.1            31.6
## 286          Hernandezville         1         0.1            31.7
## 287                Hessstad         1         0.1            31.8
## 288              Hintonport         1         0.1            31.9
## 289              Hobbsbury          1         0.1            32.0
## 290             Holderville         1         0.1            32.1
## 291             Hollandberg         1         0.1            32.2
## 292              Hollyfurt          1         0.1            32.3
## 293            Hubbardmouth         1         0.1            32.4
## 294          Huffmanchester         1         0.1            32.5
## 295              Hughesport         1         0.1            32.6
## 296           Hurleyborough         1         0.1            32.7
## 297                Ianmouth         1         0.1            32.8
## 298              Ingramberg         1         0.1            32.9
```

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## 299           Isaacborough        1        0.1           33.0
## 300           Jacksonburgh        1        0.1           33.1
## 301           Jacksonmouth        1        0.1           33.2
## 302            Jacksonstad        1        0.1           33.3
## 303              Jacobstad        1        0.1           33.4
## 304         Jacquelineshire        1        0.1           33.5
## 305              Jamesberg        1        0.1           33.6
## 306              Jamesfurt        1        0.1           33.7
## 307             Jamesmouth        1        0.1           33.8
## 308             Jamesville        1        0.1           33.9
## 309              Jamieberg        1        0.1           34.0
## 310              Jamiefort        1        0.1           34.1
## 311             Janiceview        1        0.1           34.2
## 312            Jasminefort        1        0.1           34.3
## 313               Jayville        1        0.1           34.4
## 314           Jeffreyburgh        1        0.1           34.5
## 315           Jeffreymouth        1        0.1           34.6
## 316           Jeffreyshire        1        0.1           34.7
## 317          Jenniferhaven        1        0.1           34.8
## 318           Jenniferstad        1        0.1           34.9
## 319          Jensenborough        1        0.1           35.0
## 320              Jensenton        1        0.1           35.1
## 321             Jeremybury        1        0.1           35.2
## 322            Jeremyshire        1        0.1           35.3
## 323           Jessicahaven        1        0.1           35.4
## 324           Jessicashire        1        0.1           35.5
## 325            Jessicastad        1        0.1           35.6
## 326              Joanntown        1        0.1           35.7
## 327             Joechester        1        0.1           35.8
## 328               Johnport        1        0.1           35.9
## 329            Johnsonfort        1        0.1           36.0
## 330            Johnsontown        1        0.1           36.1
## 331            Johnsonview        1        0.1           36.2
## 332              Johnsport        1        0.1           36.3
## 333          Johnstonmouth        1        0.1           36.4
## 334          Johnstonshire        1        0.1           36.5
## 335           Jonathanland        1        0.1           36.6
## 336           Jonathantown        1        0.1           36.7
## 337              Jonesland        1        0.1           36.8
## 338             Jonesmouth        1        0.1           36.9
## 339             Jonesshire        1        0.1           37.0
## 340           Jordanmouth        1        0.1           37.1
## 341           Jordanshire        1        0.1           37.2
## 342            Jordantown        1        0.1           37.3
## 343            Josephberg        1        0.1           37.4
## 344           Josephmouth        1        0.1           37.5
## 345            Josephstad        1        0.1           37.6
## 346           Joshuaburgh        1        0.1           37.7
## 347           Joshuamouth        1        0.1           37.8
## 348              Juanport        1        0.1           37.9
## 349             Juliaport        1        0.1           38.0
## 350             Julietown        1        0.1           38.1
## 351            Karenmouth        1        0.1           38.2
## 352              Karenton        1        0.1           38.3
```

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## 353              Katieport         1        0.1           38.4
## 354             Kaylashire         1        0.1           38.5
## 355              Keithtown         1        0.1           38.6
## 356              Kellytown         1        0.1           38.7
## 357            Kennedyfurt         1        0.1           38.8
## 358            Kennethview         1        0.1           38.9
## 359              Kentmouth         1        0.1           39.0
## 360              Kevinberg         1        0.1           39.1
## 361           Kevinchester         1        0.1           39.2
## 362          Kimberlyhaven         1        0.1           39.3
## 363          Kimberlymouth         1        0.1           39.4
## 364           Kimberlytown         1        0.1           39.5
## 365           Kingchester         1        0.1           39.6
## 366              Kingshire         1        0.1           39.7
## 367              Klineside         1        0.1           39.8
## 368             Knappburgh         1        0.1           39.9
## 369           Kristineberg         1        0.1           40.0
## 370            Kristinfurt         1        0.1           40.1
## 371            Kristintown         1        0.1           40.2
## 372            Kyleborough         1        0.1           40.3
## 373              Kylieview         1        0.1           40.4
## 374            Lake Adrian         1        0.1           40.5
## 375        Lake Allenville         1        0.1           40.6
## 376            Lake Amanda         1        0.1           40.7
## 377               Lake Amy         1        0.1           40.8
## 378            Lake Angela         1        0.1           40.9
## 379         Lake Annashire         1        0.1           41.0
## 380        Lake Beckyburgh         1        0.1           41.1
## 381       Lake Brandonview         1        0.1           41.2
## 382             Lake Brian         1        0.1           41.3
## 383     Lake Cassandraport         1        0.1           41.4
## 384     Lake Charlottestad         1        0.1           41.5
## 385   Lake Christopherfurt         1        0.1           41.6
## 386        Lake Conniefurt         1        0.1           41.7
## 387          Lake Courtney         1        0.1           41.8
## 388         Lake Craigview         1        0.1           41.9
## 389           Lake Cynthia         1        0.1           42.0
## 390          Lake Danielle         1        0.1           42.1
## 391     Lake Deannaborough         1        0.1           42.2
## 392      Lake Deborahburgh         1        0.1           42.3
## 393            Lake Dustin         1        0.1           42.4
## 394            Lake Edward         1        0.1           42.5
## 395     Lake Elizabethside         1        0.1           42.6
## 396          Lake Evantown         1        0.1           42.7
## 397             Lake Faith         1        0.1           42.8
## 398            Lake Gerald         1        0.1           42.9
## 399            Lake Hailey         1        0.1           43.0
## 400               Lake Ian         1        0.1           43.1
## 401             Lake Jacob         1        0.1           43.2
## 402        Lake Jacqueline         1        0.1           43.3
## 403      Lake Jasonchester         1        0.1           43.4
## 404          Lake Jennifer         1        0.1           43.5
## 405       Lake Jenniferton         1        0.1           43.6
## 406           Lake Jessica         1        0.1           43.7
```

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## 407       Lake Jessicaville         1        0.1           43.8
## 408              Lake Jesus         1        0.1           43.9
## 409         Lake Jillville         1        0.1           44.0
## 410              Lake John         1        0.1           44.1
## 411          Lake Johnbury         1        0.1           44.2
## 412       Lake Jonathanview         1        0.1           44.3
## 413            Lake Joseph         1        0.1           44.4
## 414          Lake Josetown         1        0.1           44.5
## 415        Lake Joshuafurt         1        0.1           44.6
## 416             Lake Kevin         1        0.1           44.7
## 417         Lake Kurtmouth         1        0.1           44.8
## 418              Lake Lisa         1        0.1           44.9
## 419           Lake Matthew         1        0.1           45.0
## 420       Lake Matthewland         1        0.1           45.1
## 421      Lake Melindamouth         1        0.1           45.2
## 422           Lake Michael         1        0.1           45.3
## 423       Lake Michaelport         1        0.1           45.4
## 424          Lake Michelle         1        0.1           45.5
## 425      Lake Michellebury         1        0.1           45.6
## 426            Lake Nicole         1        0.1           45.7
## 427       Lake Rhondaburgh         1        0.1           45.8
## 428    Lake Stephenborough         1        0.1           45.9
## 429           Lake Timothy         1        0.1           46.0
## 430             Lake Tracy         1        0.1           46.1
## 431           Lake Vanessa         1        0.1           46.2
## 432       Lake Zacharyfurt         1        0.1           46.3
## 433            Lauraburgh         1        0.1           46.4
## 434            Laurieside         1        0.1           46.5
## 435        Lawrenceborough         1        0.1           46.6
## 436            Lawsonshire         1        0.1           46.7
## 437               Leahside         1        0.1           46.8
## 438           Leonchester         1        0.1           46.9
## 439            Lesliebury         1        0.1           47.0
## 440            Lesliefort         1        0.1           47.1
## 441            Lewismouth         1        0.1           47.2
## 442             Lindaside         1        0.1           47.3
## 443          Lindsaymouth         1        0.1           47.4
## 444              Lisaberg         1        0.1           47.5
## 445              Lisafort         1        0.1           47.6
## 446             Lopezberg         1        0.1           47.7
## 447           Lopezmouth         1        0.1           47.8
## 448             Loriville         1        0.1           47.9
## 449             Lovemouth         1        0.1           48.0
## 450           Luischester         1        0.1           48.1
## 451              Luisfurt         1        0.1           48.2
## 452              Lukeport         1        0.1           48.3
## 453        Mackenziemouth         1        0.1           48.4
## 454           Marcushaven         1        0.1           48.5
## 455            Mariahview         1        0.1           48.6
## 456             Mariebury         1        0.1           48.7
## 457            Mariemouth         1        0.1           48.8
## 458             Markhaven         1        0.1           48.9
## 459            Masonhaven         1        0.1           49.0
## 460           Masseyshire         1        0.1           49.1
```

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## 461              Mataberg         1         0.1           49.2
## 462           Matthewtown         1         0.1           49.3
## 463           Mauricefurt         1         0.1           49.4
## 464          Mauriceshire         1         0.1           49.5
## 465          Mcdonaldfort         1         0.1           49.6
## 466       Mclaughlinbury          1         0.1           49.7
## 467           Meaganfort          1         0.1           49.8
## 468         Meghanchester         1         0.1           49.9
## 469           Melanieton          1         0.1           50.0
## 470       Melissachester          1         0.1           50.1
## 471          Melissafurt          1         0.1           50.2
## 472          Melissastad          1         0.1           50.3
## 473         Meyerchester          1         0.1           50.4
## 474           Meyersstad          1         0.1           50.5
## 475              Mezaton          1         0.1           50.6
## 476          Michaelland          1         0.1           50.7
## 477         Michaelmouth          1         0.1           50.8
## 478         Michaelshire          1         0.1           50.9
## 479          Micheletown          1         0.1           51.0
## 480         Michellefort          1         0.1           51.1
## 481        Millerchester          1         0.1           51.2
## 482           Millerfort          1         0.1           51.3
## 483           Millerland          1         0.1           51.4
## 484           Millerside          1         0.1           51.5
## 485           Millerview          1         0.1           51.6
## 486            Mollyport          1         0.1           51.7
## 487           Monicaview          1         0.1           51.8
## 488           Morganfort          1         0.1           51.9
## 489           Morganport          1         0.1           52.0
## 490          Morrismouth          1         0.1           52.1
## 491          Mosleyburgh          1         0.1           52.2
## 492           Mullenside          1         0.1           52.3
## 493            Munozberg          1         0.1           52.4
## 494          Murphymouth          1         0.1           52.5
## 495           Nelsonfurt          1         0.1           52.6
## 496           New Amanda          1         0.1           52.7
## 497         New Angelview         1         0.1           52.8
## 498            New Brandy          1         0.1           52.9
## 499       New Brendafurt          1         0.1           53.0
## 500    New Charleschester         1         0.1           53.1
## 501     New Christinatown         1         0.1           53.2
## 502           New Cynthia          1         0.1           53.3
## 503      New Daniellefort          1         0.1           53.4
## 504           New Darlene          1         0.1           53.5
## 505          New Dawnland          1         0.1           53.6
## 506        New Debbiestad          1         0.1           53.7
## 507        New Denisebury          1         0.1           53.8
## 508        New Frankshire          1         0.1           53.9
## 509           New Gabriel          1         0.1           54.0
## 510             New Henry          1         0.1           54.1
## 511         New Hollyberg          1         0.1           54.2
## 512             New James          1         0.1           54.3
## 513         New Jamestown          1         0.1           54.4
## 514           New Jasmine          1         0.1           54.5
```

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## 515               New Jay         1        0.1           54.6
## 516     New Jeffreychester         1        0.1           54.7
## 517          New Johnberg         1        0.1           54.8
## 518        New Joshuaport         1        0.1           54.9
## 519              New Juan         1        0.1           55.0
## 520        New Julianberg         1        0.1           55.1
## 521             New Julie         1        0.1           55.2
## 522         New Karenberg         1        0.1           55.3
## 523             New Kayla         1        0.1           55.4
## 524        New Keithburgh         1        0.1           55.5
## 525         New Lindaberg         1        0.1           55.6
## 526        New Lucasburgh         1        0.1           55.7
## 527        New Marcusbury         1        0.1           55.8
## 528             New Maria         1        0.1           55.9
## 529           New Matthew         1        0.1           56.0
## 530           New Michael         1        0.1           56.1
## 531       New Michaeltown         1        0.1           56.2
## 532             New Nancy         1        0.1           56.3
## 533            New Nathan         1        0.1           56.4
## 534     New Patriciashire         1        0.1           56.5
## 535           New Patrick         1        0.1           56.6
## 536              New Paul         1        0.1           56.7
## 537            New Rachel         1        0.1           56.8
## 538           New Rebecca         1        0.1           56.9
## 539           New Sabrina         1        0.1           57.0
## 540              New Sean         1        0.1           57.1
## 541            New Shane         1        0.1           57.2
## 542           New Sharon         1        0.1           57.3
## 543        New Sonialand         1        0.1           57.4
## 544             New Steve         1        0.1           57.5
## 545             New Tammy         1        0.1           57.6
## 546       New Taylorburgh         1        0.1           57.7
## 547            New Teresa         1        0.1           57.8
## 548           New Theresa         1        0.1           57.9
## 549            New Thomas         1        0.1           58.0
## 550           New Timothy         1        0.1           58.1
## 551              New Tina         1        0.1           58.2
## 552         New Tinamouth         1        0.1           58.3
## 553        New Traceystad         1        0.1           58.4
## 554            New Travis         1        0.1           58.5
## 555        New Travistown         1        0.1           58.6
## 556             New Tyler         1        0.1           58.7
## 557             New Wanda         1        0.1           58.8
## 558      New Williammouth         1        0.1           58.9
## 559      New Williamville         1        0.1           59.0
## 560            Newmanberg         1        0.1           59.1
## 561          Nicholasland         1        0.1           59.2
## 562          Nicholasport         1        0.1           59.3
## 563      North Aaronburgh         1        0.1           59.4
## 564    North Aaronchester         1        0.1           59.5
## 565       North Alexandra         1        0.1           59.6
## 566         North Anaport         1        0.1           59.7
## 567          North Andrew         1        0.1           59.8
## 568      North Andrewstad         1        0.1           59.9
```

```
## 569        North Angelastad         1        0.1           60.0
## 570        North Angelatown         1        0.1           60.1
## 571              North Anna         1        0.1           60.2
## 572             North April         1        0.1           60.3
## 573           North Brandon         1        0.1           60.4
## 574     North Brittanyburgh         1        0.1           60.5
## 575            North Cassie         1        0.1           60.6
## 576       North Charlesbury         1        0.1           60.7
## 577       North Christopher         1        0.1           60.8
## 578             North Debra         1        0.1           60.9
## 579        North Debrashire         1        0.1           61.0
## 580        North Derekville         1        0.1           61.1
## 581           North Destiny         1        0.1           61.2
## 582         North Elizabeth         1        0.1           61.3
## 583         North Frankstad         1        0.1           61.4
## 584         North Garyhaven         1        0.1           61.5
## 585     North Isabellaville         1        0.1           61.6
## 586     North Jenniferburgh         1        0.1           61.7
## 587        North Jeremyport         1        0.1           61.8
## 588      North Jessicaville         1        0.1           61.9
## 589          North Johnside         1        0.1           62.0
## 590          North Johntown         1        0.1           62.1
## 591          North Jonathan         1        0.1           62.2
## 592            North Joshua         1        0.1           62.3
## 593             North Katie         1        0.1           62.4
## 594       North Kennethside         1        0.1           62.5
## 595         North Kevinside         1        0.1           62.6
## 596          North Kimberly         1        0.1           62.7
## 597          North Kristine         1        0.1           62.8
## 598         North Lauraland         1        0.1           62.9
## 599        North Laurenview         1        0.1           63.0
## 600         North Leonmouth         1        0.1           63.1
## 601       North Lisachester         1        0.1           63.2
## 602         North Loriburgh         1        0.1           63.3
## 603              North Mark         1        0.1           63.4
## 604          North Maryland         1        0.1           63.5
## 605          North Mercedes         1        0.1           63.6
## 606           North Michael         1        0.1           63.7
## 607       North Monicaville         1        0.1           63.8
## 608             North Randy         1        0.1           63.9
## 609           North Raymond         1        0.1           64.0
## 610            North Regina         1        0.1           64.1
## 611       North Ricardotown         1        0.1           64.2
## 612      North Richardburgh         1        0.1           64.3
## 613       North Ronaldshire         1        0.1           64.4
## 614    North Russellborough         1        0.1           64.5
## 615         North Samantha         1        0.1           64.6
## 616         North Sarashire         1        0.1           64.7
## 617           North Shannon         1        0.1           64.8
## 618     North Stephanieberg         1        0.1           64.9
## 619              North Tara         1        0.1           65.0
## 620           North Tiffany         1        0.1           65.1
## 621         North Tracyport         1        0.1           65.2
## 622         North Tylerland         1        0.1           65.3
```

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## 623          North Virginia         1        0.1           65.4
## 624     North Wesleychester         1        0.1           65.5
## 625              Novaktown          1        0.1           65.6
## 626              Odomville          1        0.1           65.7
## 627              Olsonside          1        0.1           65.8
## 628              Olsonstad          1        0.1           65.9
## 629             Palmerside          1        0.1           66.0
## 630            Parkerhaven          1        0.1           66.1
## 631          Patriciahaven          1        0.1           66.2
## 632           Patrickmouth          1        0.1           66.3
## 633             Pattymouth          1        0.1           66.4
## 634              Paulhaven          1        0.1           66.5
## 635               Paulport          1        0.1           66.6
## 636              Paulshire          1        0.1           66.7
## 637            Pearsonfort          1        0.1           66.8
## 638                Penatown         1        0.1           66.9
## 639              Perezland          1        0.1           67.0
## 640             Perryburgh          1        0.1           67.1
## 641           Petersonfurt          1        0.1           67.2
## 642          Phelpschester          1        0.1           67.3
## 643             Philipberg          1        0.1           67.4
## 644           Phillipsbury          1        0.1           67.5
## 645        Port Aliciabury          1        0.1           67.6
## 646       Port Angelamouth          1        0.1           67.7
## 647           Port Anthony          1        0.1           67.8
## 648        Port Aprilville          1        0.1           67.9
## 649              Port Beth          1        0.1           68.0
## 650             Port Blake          1        0.1           68.1
## 651            Port Brenda          1        0.1           68.2
## 652             Port Brian          1        0.1           68.3
## 653         Port Brianfort          1        0.1           68.4
## 654     Port Brittanyville          1        0.1           68.5
## 655        Port Brookeland          1        0.1           68.6
## 656        Port Calvintown          1        0.1           68.7
## 657            Port Cassie          1        0.1           68.8
## 658        Port Chasemouth          1        0.1           68.9
## 659         Port Christina          1        0.1           69.0
## 660    Port Christinemouth          1        0.1           69.1
## 661       Port Christopher          1        0.1           69.2
## 662 Port Christopherborough         1        0.1           69.3
## 663           Port Crystal          1        0.1           69.4
## 664            Port Daniel          1        0.1           69.5
## 665      Port Danielleberg          1        0.1           69.6
## 666         Port Davidland          1        0.1           69.7
## 667            Port Dennis          1        0.1           69.8
## 668         Port Derekberg          1        0.1           69.9
## 669           Port Destiny          1        0.1           70.0
## 670    Port Douglasborough          1        0.1           70.1
## 671            Port Elijah          1        0.1           70.2
## 672              Port Eric          1        0.1           70.3
## 673         Port Erikhaven          1        0.1           70.4
## 674          Port Erinberg          1        0.1           70.5
## 675        Port Eugeneport          1        0.1           70.6
## 676        Port Georgebury          1        0.1           70.7
```

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## 677           Port Gregory         1        0.1           70.8
## 678        Port Jacqueline         1        0.1           70.9
## 679    Port Jacquelinestad         1        0.1           71.0
## 680             Port James         1        0.1           71.1
## 681            Port Jasmine         1        0.1           71.2
## 682       Port Jefferybury         1        0.1           71.3
## 683            Port Jeffrey         1        0.1           71.4
## 684           Port Jennifer         1        0.1           71.5
## 685            Port Jessica         1        0.1           71.6
## 686      Port Jessicamouth         1        0.1           71.7
## 687              Port Jodi         1        0.1           71.8
## 688        Port Joshuafort         1        0.1           71.9
## 689         Port Karenfurt         1        0.1           72.0
## 690       Port Katelynview         1        0.1           72.1
## 691      Port Kathleenfort         1        0.1           72.2
## 692      Port Kevinborough         1        0.1           72.3
## 693          Port Lawrence         1        0.1           72.4
## 694             Port Maria         1        0.1           72.5
## 695            Port Mathew         1        0.1           72.6
## 696       Port Melissaberg         1        0.1           72.7
## 697       Port Melissastad         1        0.1           72.8
## 698      Port Michaelmouth         1        0.1           72.9
## 699      Port Michealburgh         1        0.1           73.0
## 700          Port Mitchell         1        0.1           73.1
## 701        Port Patrickton         1        0.1           73.2
## 702          Port Paultown         1        0.1           73.3
## 703            Port Rachel         1        0.1           73.4
## 704       Port Raymondfort         1        0.1           73.5
## 705             Port Robin         1        0.1           73.6
## 706        Port Sarahhaven         1        0.1           73.7
## 707        Port Sarahshire         1        0.1           73.8
## 708        Port Sherrystad         1        0.1           73.9
## 709            Port Stacey         1        0.1           74.0
## 710             Port Stacy         1        0.1           74.1
## 711             Port Susan         1        0.1           74.2
## 712      Port Whitneyhaven         1        0.1           74.3
## 713            Portermouth         1        0.1           74.4
## 714            Pottermouth         1        0.1           74.5
## 715             Princebury         1        0.1           74.6
## 716            Pruittmouth         1        0.1           74.7
## 717            Rachelhaven         1        0.1           74.8
## 718           Ramirezhaven         1        0.1           74.9
## 719            Ramirezland         1        0.1           75.0
## 720            Ramirezside         1        0.1           75.1
## 721             Ramirezton         1        0.1           75.2
## 722              Ramosstad         1        0.1           75.3
## 723           Randolphport         1        0.1           75.4
## 724             Randyshire         1        0.1           75.5
## 725           Rebeccamouth         1        0.1           75.6
## 726            Reginamouth         1        0.1           75.7
## 727           Reneechester         1        0.1           75.8
## 728              Reyesfurt         1        0.1           75.9
## 729              Reyesland         1        0.1           76.0
## 730          Rhondaborough         1        0.1           76.1
```

```
## 731            Richardshire         1         0.1            76.2
## 732            Richardsland         1         0.1            76.3
## 733          Richardsonland         1         0.1            76.4
## 734         Richardsonmouth         1         0.1            76.5
## 735         Richardsonshire         1         0.1            76.6
## 736          Richardsontown         1         0.1            76.7
## 737              Rickymouth         1         0.1            76.8
## 738               Riggsstad         1         0.1            76.9
## 739               Rivasland         1         0.1            77.0
## 740              Robertbury         1         0.1            77.1
## 741             Robertmouth         1         0.1            77.2
## 742              Robertside         1         0.1            77.3
## 743          Robertsonburgh         1         0.1            77.4
## 744             Robertstown         1         0.1            77.5
## 745              Roberttown         1         0.1            77.6
## 746            Robinsonland         1         0.1            77.7
## 747            Robinsontown         1         0.1            77.8
## 748               Rochabury         1         0.1            77.9
## 749              Rogerburgh         1         0.1            78.0
## 750               Rogerland         1         0.1            78.1
## 751              Ronaldport         1         0.1            78.2
## 752             Ronniemouth         1         0.1            78.3
## 753            Russellville         1         0.1            78.4
## 754               Ryanhaven         1         0.1            78.5
## 755             Sabrinaview         1         0.1            78.6
## 756             Salazarbury         1         0.1            78.7
## 757            Samanthaland         1         0.1            78.8
## 758           Samuelborough         1         0.1            78.9
## 759             Sanchezland         1         0.1            79.0
## 760            Sanchezmouth         1         0.1            79.1
## 761             Sandersland         1         0.1            79.2
## 762             Sanderstown         1         0.1            79.3
## 763              Sandraland         1         0.1            79.4
## 764             Sandrashire         1         0.1            79.5
## 765             Sandraville         1         0.1            79.6
## 766                Sarafurt         1         0.1            79.7
## 767              Sarahland         1         0.1            79.8
## 768                Sarahton         1         0.1            79.9
## 769            Sellerstown         1         0.1            80.0
## 770              Shaneland         1         0.1            80.1
## 771              Sharpberg         1         0.1            80.2
## 772              Shawnside         1         0.1            80.3
## 773                Shawstad         1         0.1            80.4
## 774             Sherrishire         1         0.1            80.5
## 775             Shirleyfort         1         0.1            80.6
## 776                Silvaton         1         0.1            80.7
## 777             Smithburgh         1         0.1            80.8
## 778              Smithside         1         0.1            80.9
## 779              Smithtown         1         0.1            81.0
## 780            South Aaron         1         0.1            81.1
## 781             South Adam         1         0.1            81.2
## 782        South Adamhaven         1         0.1            81.3
## 783    South Alexisborough         1         0.1            81.4
## 784        South Blakestad         1         0.1            81.5
```

```
## 785            South Brian         1         0.1           81.6
## 786          South Cathyfurt       1         0.1           81.7
## 787       South Christopher        1         0.1           81.8
## 788            South Corey         1         0.1           81.9
## 789      South Cynthiashire        1         0.1           82.0
## 790            South Daniel        1         0.1           82.1
## 791      South Daniellefort        1         0.1           82.2
## 792        South Davidhaven        1         0.1           82.3
## 793        South Davidmouth        1         0.1           82.4
## 794            South Denise        1         0.1           82.5
## 795        South Denisefurt        1         0.1           82.6
## 796        South Dianeshire        1         0.1           82.7
## 797            South George        1         0.1           82.8
## 798             South Henry        1         0.1           82.9
## 799        South Jackieberg        1         0.1           83.0
## 800             South Jade         1         0.1           83.1
## 801         South Jaimeview        1         0.1           83.2
## 802       South Jasminebury        1         0.1           83.3
## 803        South Jeanneport        1         0.1           83.4
## 804          South Jennifer        1         0.1           83.5
## 805           South Jessica        1         0.1           83.6
## 806              South John        1         0.1           83.7
## 807       South Johnnymouth        1         0.1           83.8
## 808             South Kyle         1         0.1           83.9
## 809          South Lauraton        1         0.1           84.0
## 810         South Lauratown        1         0.1           84.1
## 811            South Manuel        1         0.1           84.2
## 812          South Margaret        1         0.1           84.3
## 813             South Mark         1         0.1           84.4
## 814            South Meghan        1         0.1           84.5
## 815     South Meredithmouth        1         0.1           84.6
## 816            South Pamela        1         0.1           84.7
## 817       South Patrickfort        1         0.1           84.8
## 818            South Peter         1         0.1           84.9
## 819           South Rebecca        1         0.1           85.0
## 820             South Renee        1         0.1           85.1
## 821            South Robert        1         0.1           85.2
## 822            South Ronald        1         0.1           85.3
## 823     South Stephanieport        1         0.1           85.4
## 824        South Tiffanyton        1         0.1           85.5
## 825           South Tomside        1         0.1           85.6
## 826              South Troy        1         0.1           85.7
## 827    South Vincentchester        1         0.1           85.8
## 828            South Walter        1         0.1           85.9
## 829              Staceyfort        1         0.1           86.0
## 830         Stephenborough         1         0.1           86.1
## 831              Stewartbury        1         0.1           86.2
## 832              Suzannetown        1         0.1           86.3
## 833              Sylviaview         1         0.1           86.4
## 834              Tammymouth         1         0.1           86.5
## 835              Tammyshire         1         0.1           86.6
## 836              Taylorberg         1         0.1           86.7
## 837             Taylorhaven         1         0.1           86.8
## 838             Taylormouth         1         0.1           86.9
```

```
## 839             Taylorport         1         0.1           87.0
## 840            Teresahaven         1         0.1           87.1
## 841             Thomasstad         1         0.1           87.2
## 842             Thomasview         1         0.1           87.3
## 843            Timothyfurt         1         0.1           87.4
## 844           Timothymouth         1         0.1           87.5
## 845            Timothyport         1         0.1           87.6
## 846            Timothytown         1         0.1           87.7
## 847            Tinachester         1         0.1           87.8
## 848                 Tinaton         1         0.1           87.9
## 849           Townsendfurt         1         0.1           88.0
## 850             Tracyhaven         1         0.1           88.1
## 851               Tranland         1         0.1           88.2
## 852             Troyville         1         0.1           88.3
## 853          Turnerchester         1         0.1           88.4
## 854             Turnerview         1         0.1           88.5
## 855            Turnerville         1         0.1           88.6
## 856             Tylerport         1         0.1           88.7
## 857            Valerieland         1         0.1           88.8
## 858            Vanessastad         1         0.1           88.9
## 859            Vanessaview         1         0.1           89.0
## 860         Villanuevastad         1         0.1           89.1
## 861          Villanuevaton         1         0.1           89.2
## 862              Wademouth         1         0.1           89.3
## 863               Wadestad         1         0.1           89.4
## 864          Wagnerchester         1         0.1           89.5
## 865         Wallacechester         1         0.1           89.6
## 866              Walshhaven         1         0.1           89.7
## 867              Waltertown         1         0.1           89.8
## 868              Watsonfort         1         0.1           89.9
## 869              Welchshire         1         0.1           90.0
## 870                Wendyton         1         0.1           90.1
## 871              Wendyville         1         0.1           90.2
## 872              West Alice         1         0.1           90.3
## 873             West Alyssa         1         0.1           90.4
## 874             West Andrew         1         0.1           90.5
## 875             West Angela         1         0.1           90.6
## 876        West Angelabury         1         0.1           90.7
## 877          West Annefort         1         0.1           90.8
## 878         West Aprilport         1         0.1           90.9
## 879         West Arielstad         1         0.1           91.0
## 880           West Barbara         1         0.1           91.1
## 881          West Benjamin         1         0.1           91.2
## 882              West Brad         1         0.1           91.3
## 883        West Brandonton         1         0.1           91.4
## 884            West Brenda         1         0.1           91.5
## 885        West Carmenfurt         1         0.1           91.6
## 886             West Casey         1         0.1           91.7
## 887      West Chloeborough         1         0.1           91.8
## 888       West Christopher         1         0.1           91.9
## 889             West Colin         1         0.1           92.0
## 890            West Connor         1         0.1           92.1
## 891          West Courtney         1         0.1           92.2
## 892       West Daleborough         1         0.1           92.3
```

```
## 893          West Dannyberg         1         0.1           92.4
## 894              West David         1         0.1           92.5
## 895             West Dennis         1         0.1           92.6
## 896         West Derekmouth         1         0.1           92.7
## 897          West Dylanberg         1         0.1           92.8
## 898        West Eduardotown         1         0.1           92.9
## 899          West Ericaport         1         0.1           93.0
## 900           West Ericfurt         1         0.1           93.1
## 901     West Gabriellamouth         1         0.1           93.2
## 902          West Gregburgh         1         0.1           93.3
## 903            West Guybury         1         0.1           93.4
## 904              West James         1         0.1           93.5
## 905               West Jane         1         0.1           93.6
## 906         West Jeremyside         1         0.1           93.7
## 907       West Jessicahaven         1         0.1           93.8
## 908               West Jodi         1         0.1           93.9
## 909             West Joseph         1         0.1           94.0
## 910              West Julia         1         0.1           94.1
## 911             West Justin         1         0.1           94.2
## 912          West Katiefurt         1         0.1           94.3
## 913          West Kevinfurt         1         0.1           94.4
## 914              West Lacey         1         0.1           94.5
## 915            West Leahton         1         0.1           94.6
## 916        West Lindseybury         1         0.1           94.7
## 917               West Lisa         1         0.1           94.8
## 918              West Lucas         1         0.1           94.9
## 919          West Mariafort         1         0.1           95.0
## 920        West Melaniefurt         1         0.1           95.1
## 921       West Melissashire         1         0.1           95.2
## 922       West Michaelhaven         1         0.1           95.3
## 923        West Michaelport         1         0.1           95.4
## 924       West Michaelshire         1         0.1           95.5
## 925        West Michaelstad         1         0.1           95.6
## 926             West Pamela         1         0.1           95.7
## 927              West Randy         1         0.1           95.8
## 928       West Raymondmouth         1         0.1           95.9
## 929        West Rhondamouth         1         0.1           96.0
## 930            West Ricardo         1         0.1           96.1
## 931            West Richard         1         0.1           96.2
## 932         West Robertside         1         0.1           96.3
## 933            West Roytown         1         0.1           96.4
## 934            West Russell         1         0.1           96.5
## 935               West Ryan         1         0.1           96.6
## 936           West Samantha         1         0.1           96.7
## 937            West Sharon         1         0.1           96.8
## 938              West Shaun         1         0.1           96.9
## 939            West Sydney         1         0.1           97.0
## 940            West Tanner         1         0.1           97.1
## 941              West Tanya         1         0.1           97.2
## 942          West Terrifurt         1         0.1           97.3
## 943            West Thomas         1         0.1           97.4
## 944          West Tinashire         1         0.1           97.5
## 945        West Travismouth         1         0.1           97.6
## 946          West Wendyland         1         0.1           97.7
```

```
## 947            West William         1        0.1            97.8
## 948     West Zacharyborough         1        0.1            97.9
## 949               Westshire         1        0.1            98.0
## 950               Whiteport         1        0.1            98.1
## 951              Whitneyfort         1        0.1            98.2
## 952              Wilcoxport         1        0.1            98.3
## 953            Williammouth         1        0.1            98.4
## 954             Williamport         1        0.1            98.5
## 955         Williamsborough         1        0.1            98.6
## 956            Williamsfort         1        0.1            98.7
## 957           Williamsmouth         1        0.1            98.8
## 958            Williamsside         1        0.1            98.9
## 959             Williamstad         1        0.1            99.0
## 960             Wilsonburgh         1        0.1            99.1
## 961             Wintersfort         1        0.1            99.2
## 962                Wongland         1        0.1            99.3
## 963             Wrightview         1        0.1            99.4
## 964               Yangside         1        0.1            99.5
## 965             Youngburgh         1        0.1            99.6
## 966              Youngfort         1        0.1            99.7
## 967                  Yuton         1        0.1            99.8
## 968            Zacharystad         1        0.1            99.9
## 969             Zacharyton         1        0.1           100.0
```

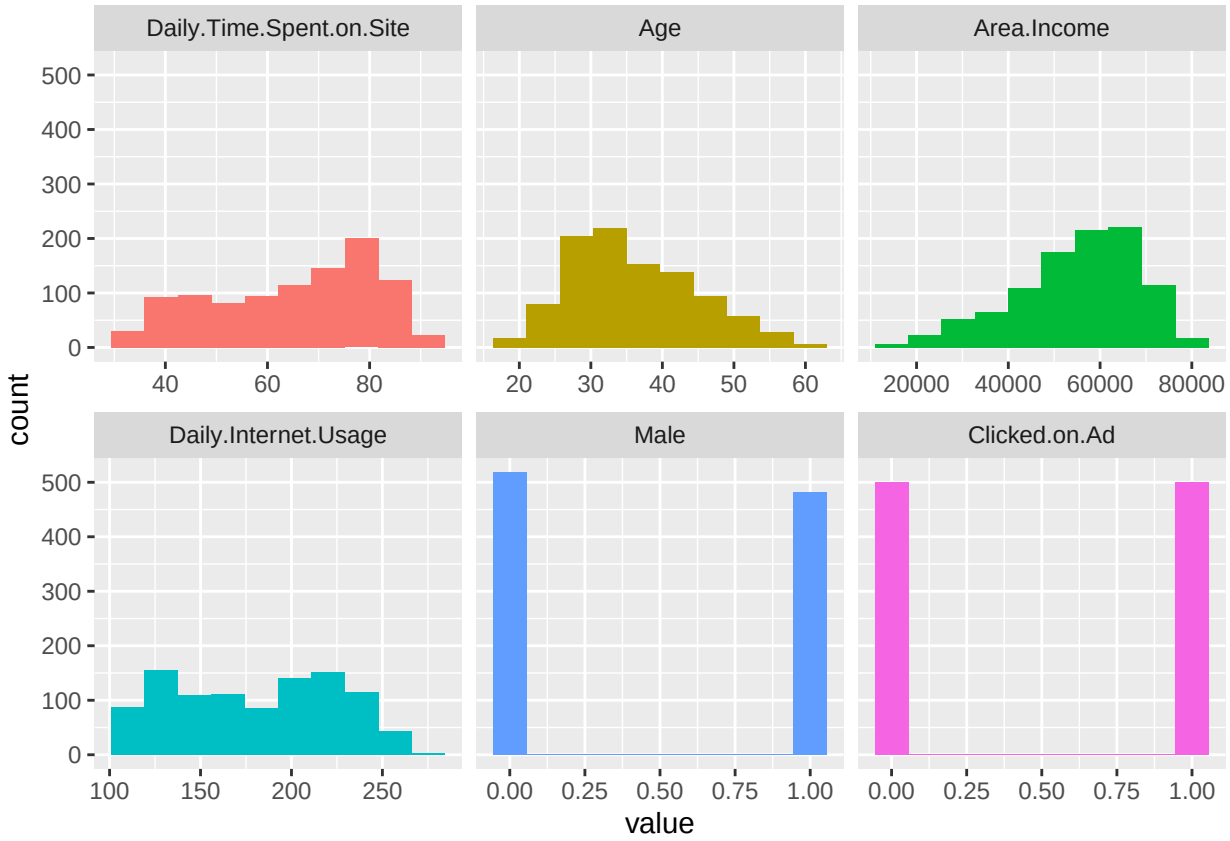
Most users are from Lisamouth and Williamsport.

```
#data %>%
#    ggplot(aes(Age)) +
#    geom_histogram(binwidth = 1.25, color = "black",fill = "grey") +
#    labs(title = "Distribution of cIty relative to clicks",
#         x = "Area.Income",
#         y = "Age") +
#    theme_minimal() +
#    scale_x_continuous(breaks = seq(7.5,35,2.5)) +
#    facet_grid(Clicked.on.Ad~.)
```

Profiling our numerical Variables

```
plot_num(data)#This function  plots the distribution of every numerical variable while automatically ex
```

```
## Warning: `guides(<scale> = FALSE)` is deprecated. Please use `guides(<scale> =
## "none")` instead.
```



From the above we can see that the age distributions is mostly on the right showing that most of the blog visitors ar below 40 years. Daily time spent is highest at 80.The Area income is above 50000 and its highest at around 70000 with the daily internet usage highest at 120 appr.Most users were from the countries Czetch Republic and France, and from the Cities, Lisamouth and Williamsport.

Correlation and Relationships

```
# Loading needed libraries
library(funModeling) # contains heart_disease data
#install.packages('minerva')
#library(minerva) # contains MIC statistic
library(ggplot2)
library(dplyr)
library(lessR)
```

```
##
## lessR 4.0.2  feedback: gerbing@pdx.edu  web: lessRstats.com/new
## ---------------------------------------------------------------
## > d <- Read("")   Read text, Excel, SPSS, SAS, or R data file
##   d is default data frame, data= in analysis routines optional
##
## Learn about reading, writing, and manipulating data, graphics,
## testing means and proportions, regression, factor analysis,
## customization, and descriptive statistics from pivot tables.
```

```
##   Enter:  browseVignettes("lessR")
##
## View changes in this new version of lessR.
##   Enter: help(package=lessR)  Click: Package NEWS

##
## Attaching package: 'lessR'

## The following object is masked from 'package:moments':
##
##     kurtosis

## The following object is masked from 'package:dplyr':
##
##     recode

## The following objects are masked from 'package:Hmisc':
##
##     label, Merge
```

```
library(reshape2)
```

```
##
## Attaching package: 'reshape2'

## The following object is masked from 'package:tidyr':
##
##     smiths
```

```
library(gridExtra) # allow us to plot two plots in a row
```

```
##
## Attaching package: 'gridExtra'

## The following object is masked from 'package:dplyr':
##
##     combine
```

```
options(scipen=999) # disable scientific notation
```

```
#b<- BarChart(Daily.Time.Spent.on.Site, data=data, by=Country)
#b$freq
```

We will first look at the linear correlation between variables and our target variable

```
correlation_table(data=data, target="Clicked.on.Ad")
```

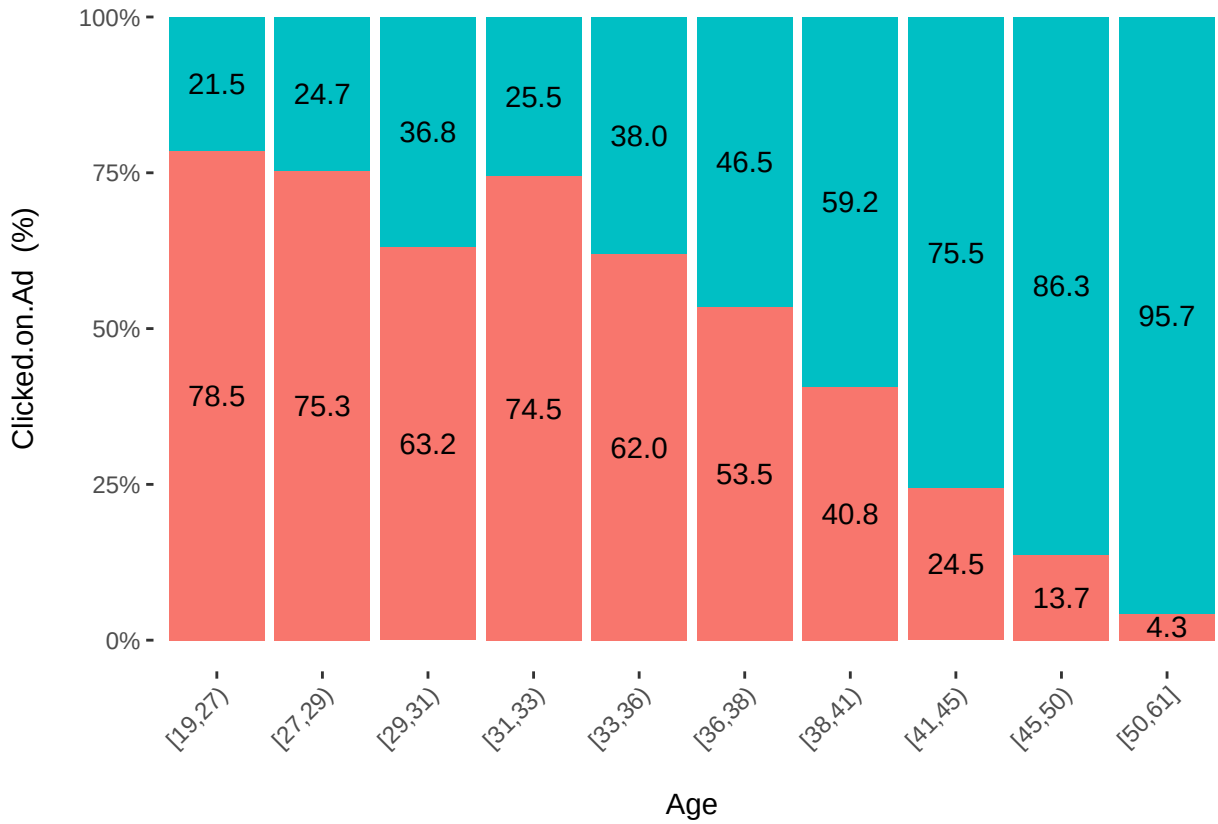
```
##                   Variable Clicked.on.Ad
## 1            Clicked.on.Ad          1.00
## 2                      Age          0.49
## 3              Area.Income         -0.48
## 4 Daily.Time.Spent.on.Site         -0.75
## 5     Daily.Internet.Usage         -0.79
```

Age is the is the most important -numerical- variable though it has a weak correlation with our target variable, The rest have negative correlation We can see the visualization below

Numerical VS Numerical visualizations

```
cross_plot(data, input = "Age", target = "Clicked.on.Ad", plot_type = "percentual")
```

```
## Plotting transformed variable 'Age' with 'equal_freq', (too many values). Disable with 'auto_binning'
```



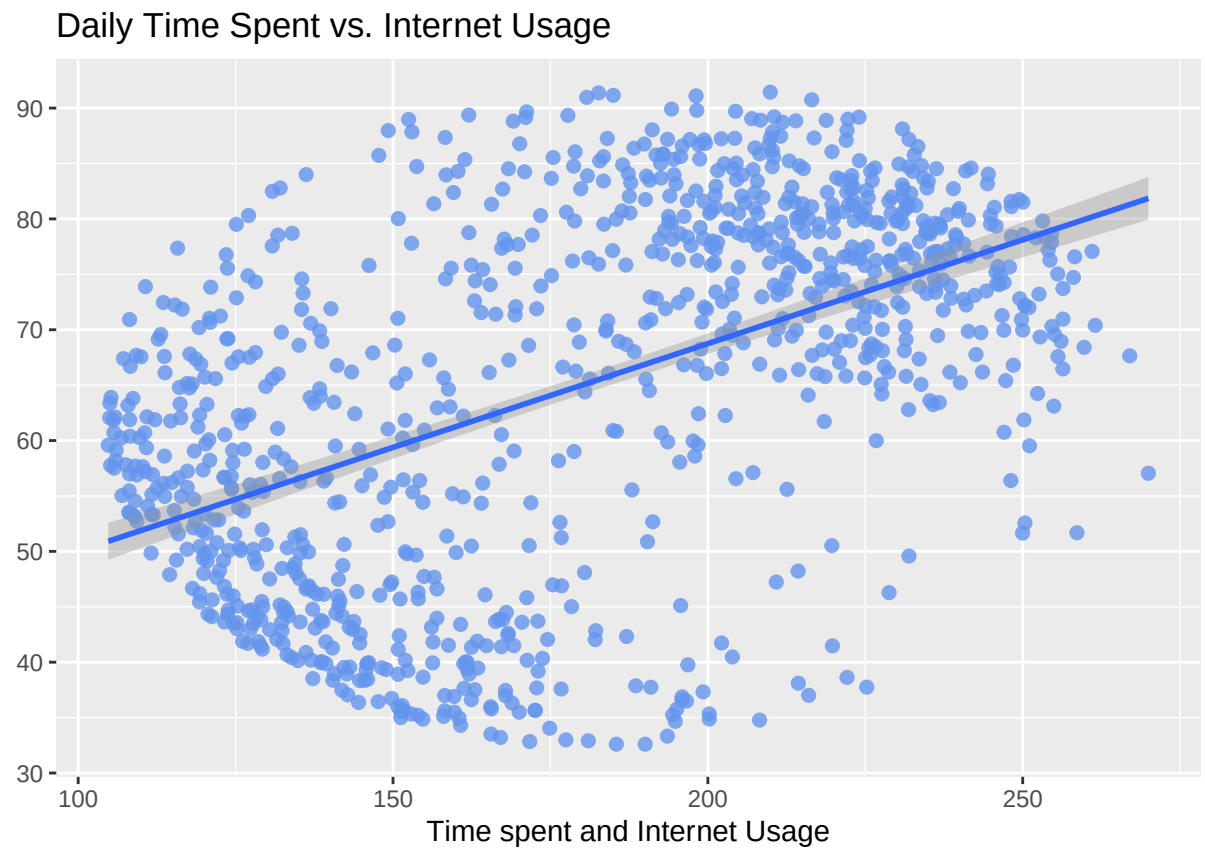
The likely hood of clicking on an ad increases if the users are 41-61 year old males.

```
#Checking the correlation Daily Time Spent on Site and Internet Usage

# simple scatterplot
ggplot(data,
       aes(x = Daily.Internet.Usage,
           y = Daily.Time.Spent.on.Site)) +
  geom_point(color="cornflowerblue",
             size = 2,
```

```
            alpha=.8) +
  geom_smooth(method = "lm") +
  labs(x = "Time spent and Internet Usage",
       y = "",
       title = "Daily Time Spent vs. Internet Usage")
```

```
## `geom_smooth()` using formula 'y ~ x'
```



Finding the covariance between the two

```
cor(data$Daily.Time.Spent.on.Site, data$Daily.Internet.Usage, method="pearson")          # apply the cov
```

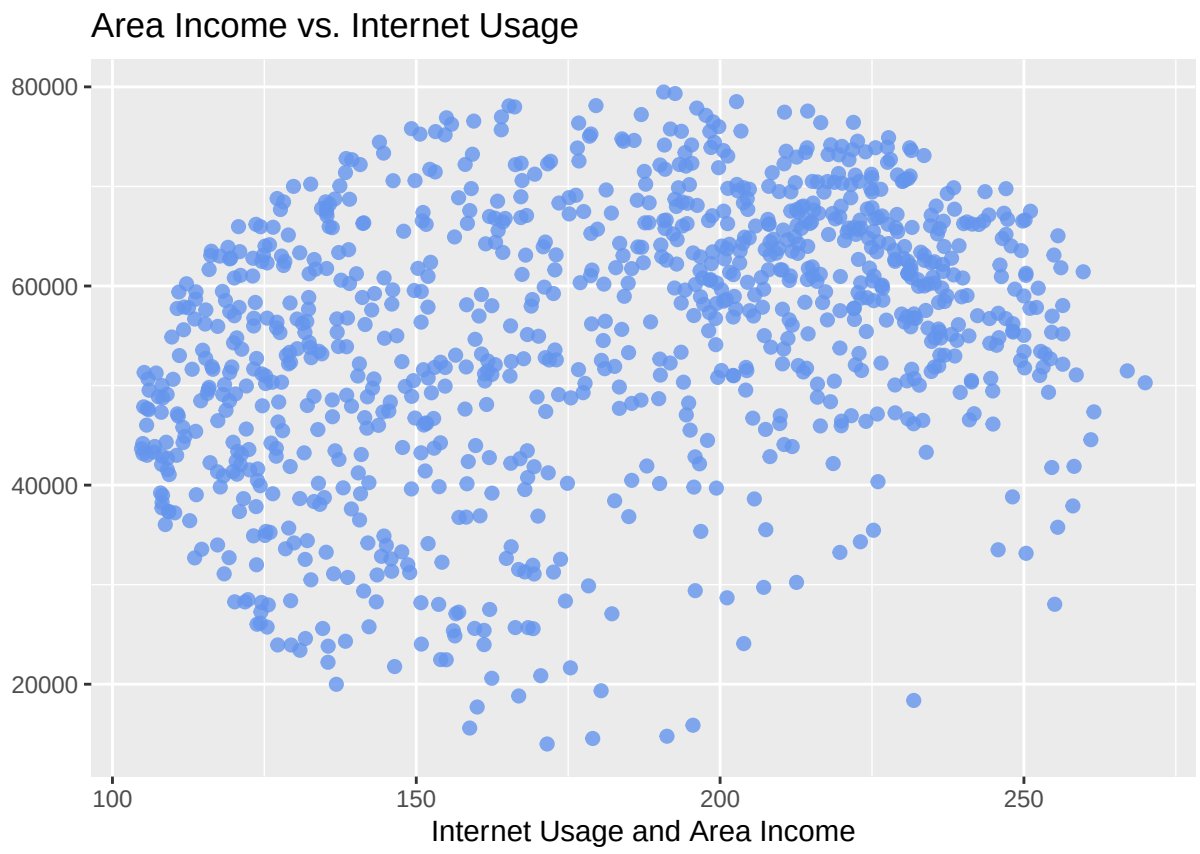
```
## [1] 0.5186585
```

The two variables are moderately correlated

```
#Checking the correlation Area Income on Site and Internet Usage

# simple scatterplot
ggplot(data,
       aes(x = Daily.Internet.Usage,
           y = Area.Income)) +
  geom_point(color="cornflowerblue",
             size = 2,
```

```
            alpha=.8) +
  # geom_smooth(method = "lm") +
   labs(x = "Internet Usage and Area Income",
       y = "",
       title = "Area Income vs. Internet Usage")
```



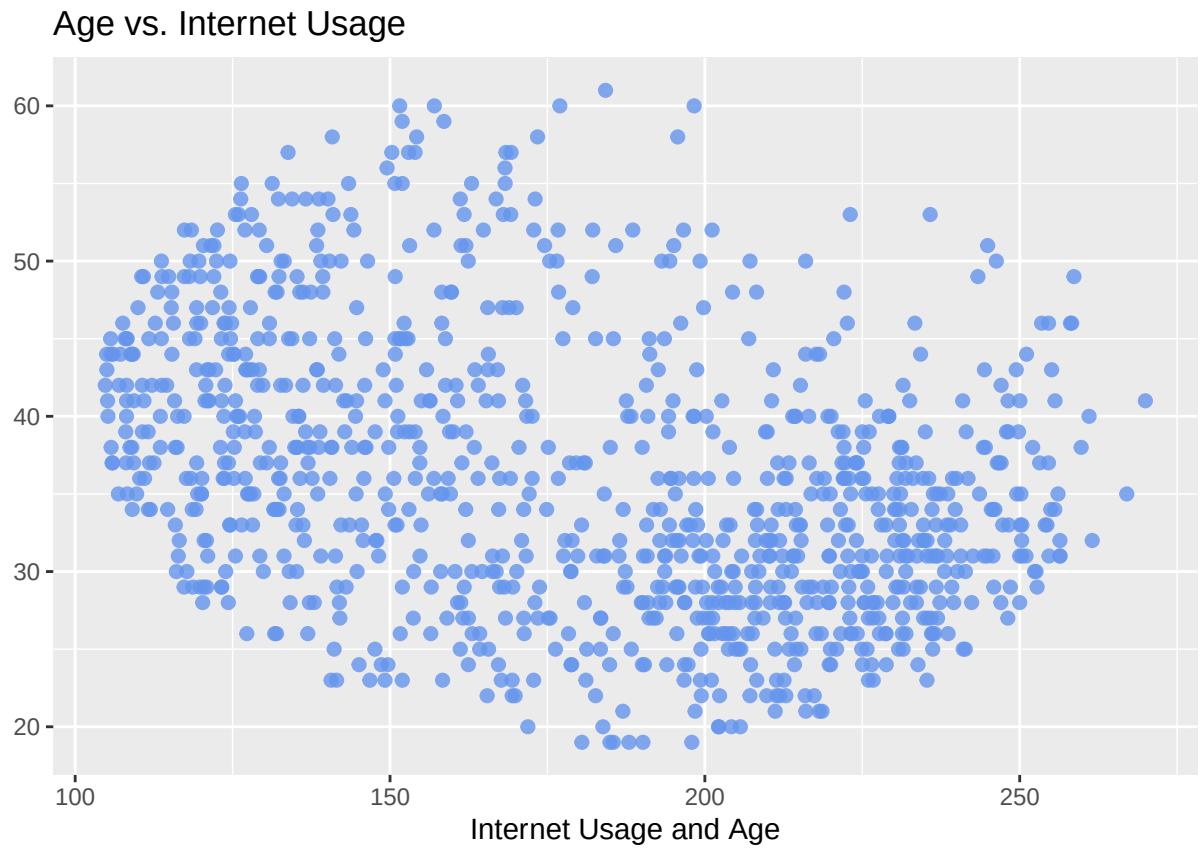

```
cor(data$Daily.Internet.Usage, data$Area.Income, method="pearson")
```

```
## [1] 0.3374955
```

The variables are moderately correlated

```
#Checking the correlation Age on Site and Internet Usage

# simple scatterplot
ggplot(data,
       aes(x = Daily_Internet_Usage,
           y = Age)) +
  geom_point(color="cornflowerblue",
             size = 2,
             alpha=.8) +
  # geom_smooth(method = "lm") +
   labs(x = "Internet Usage and Age",
       y = "",
       title = "Age vs. Internet Usage")
```




```
cor(data$Daily.Internet.Usage, data$Age, method="pearson")
```

```
## [1] -0.3672086
```

Multivariate Analysis

```
numeric_v <- data %>%
  select_if(is.numeric) %>%
  select(Age, Daily.Time.Spent.on.Site, Area.Income, Daily.Internet.Usage)
```

```
#install.packages('GGally')
library(GGally)
```

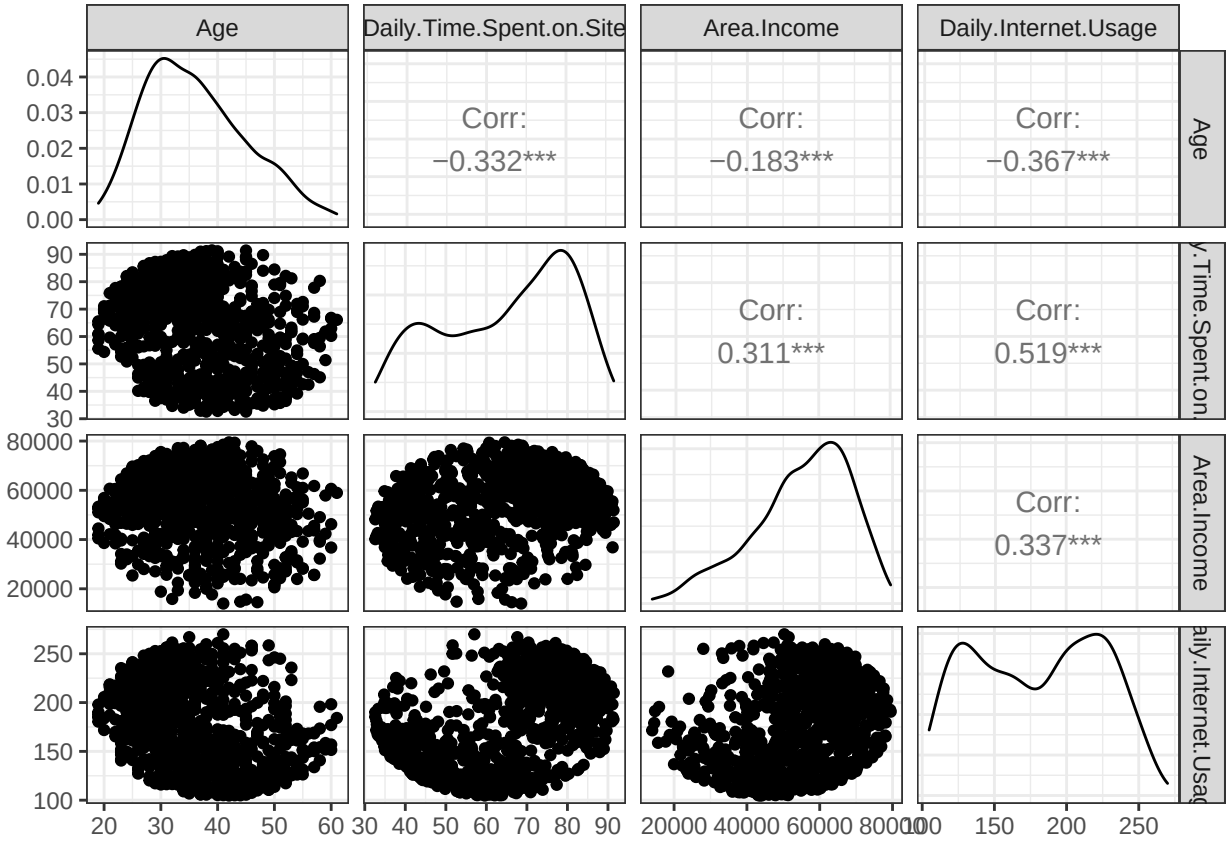
```
## Registered S3 method overwritten by 'GGally':
##   method from
##   +.gg   ggplot2
```

```
##
## Attaching package: 'GGally'
```

```
## The following object is masked from 'package:pander':
##
##     wrap
```

```
## The following object is masked from 'package:funModeling':
##
##     range01
```

```
library(ggplot2)
ggpairs(numeric_v[,-5])+ theme_bw()
```



Conclusions

As noted previously we have deduced a couple of things from our EDA. Most of the blog users: - Are not male (could identify as female or other) - Come from Czetch Republic and France countries, - Come from Lisamouth and Williamsport cities, - Web users range from the age of 19 to 61.

Recommendations

It seems that most users are actually not male. The entrepreneur could target the other users to tap into ad clicks.

We would also like to exhaustively explore the relationship between variables to find definitive relationship.