# Google Search Analysis

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## Introduction

So, analyzing the Google search first we need the Google trends data and for this i used R lib “gtrendsR”

## Installation:

install.packages(“gtrendsR”)

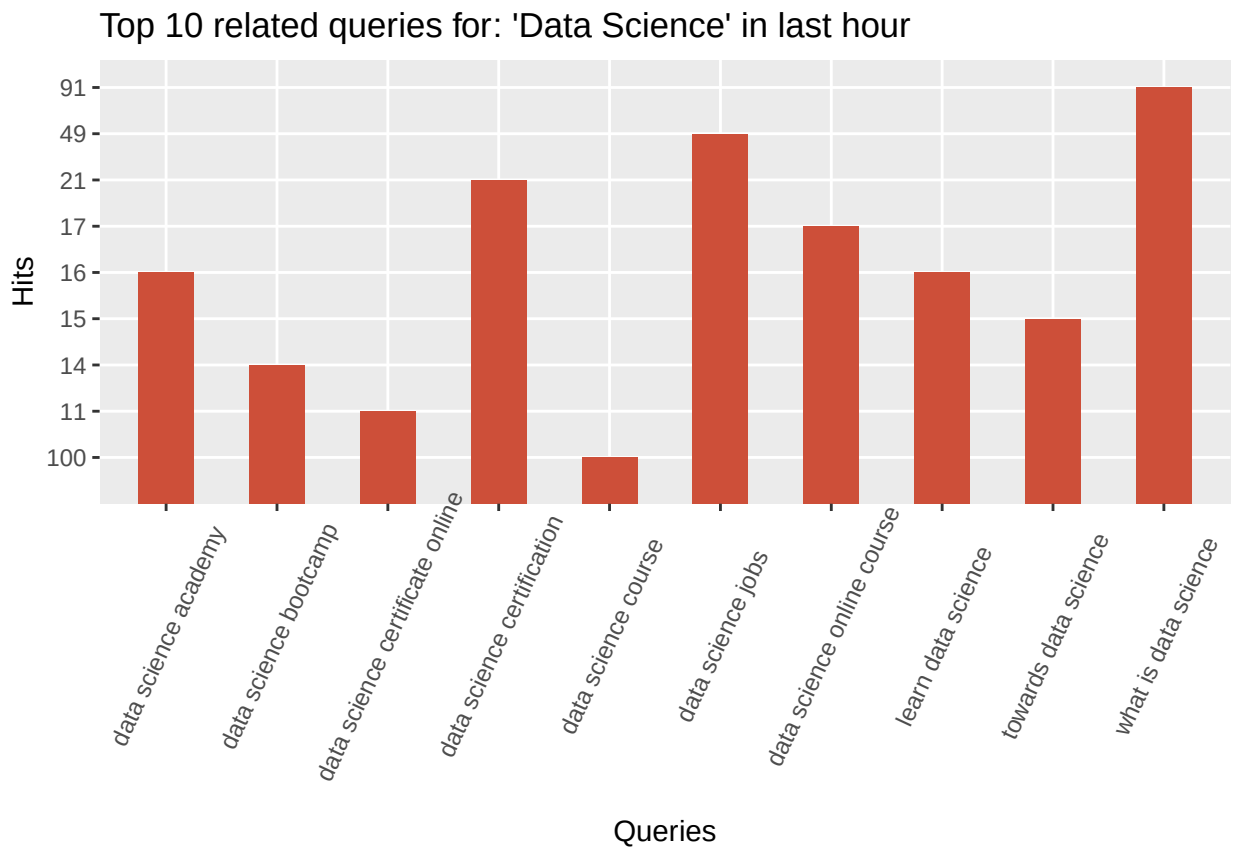
install.packages(“reshape2”)

## Top related queries in the last hour for Data Science with respect to subject

```
library(gtrendsR)
library(reshape2)
library(ggplot2)

getTopRelatedQueries <- function(keyword_, type_, time_){
  return (gtrends(keyword_, gprop = type_, time = time_)$related_queries)
}

related_queries <- getTopRelatedQueries(c("Data Science"), "web", "now 1-H")[0:10,]
topRQ <- data.frame(words=related_queries$value, freq=related_queries$subject)
ggplot(topRQ, aes(x=topRQ$words, y=topRQ$freq)) +
  geom_bar(stat="identity", width=.5, fill="tomato3") +
  labs(title="Top 10 related queries for: 'Data Science' in last hour") + xlab("Queries") + ylab("Hits")
theme(axis.text.x = element_text(angle=65, vjust=0.6))
```



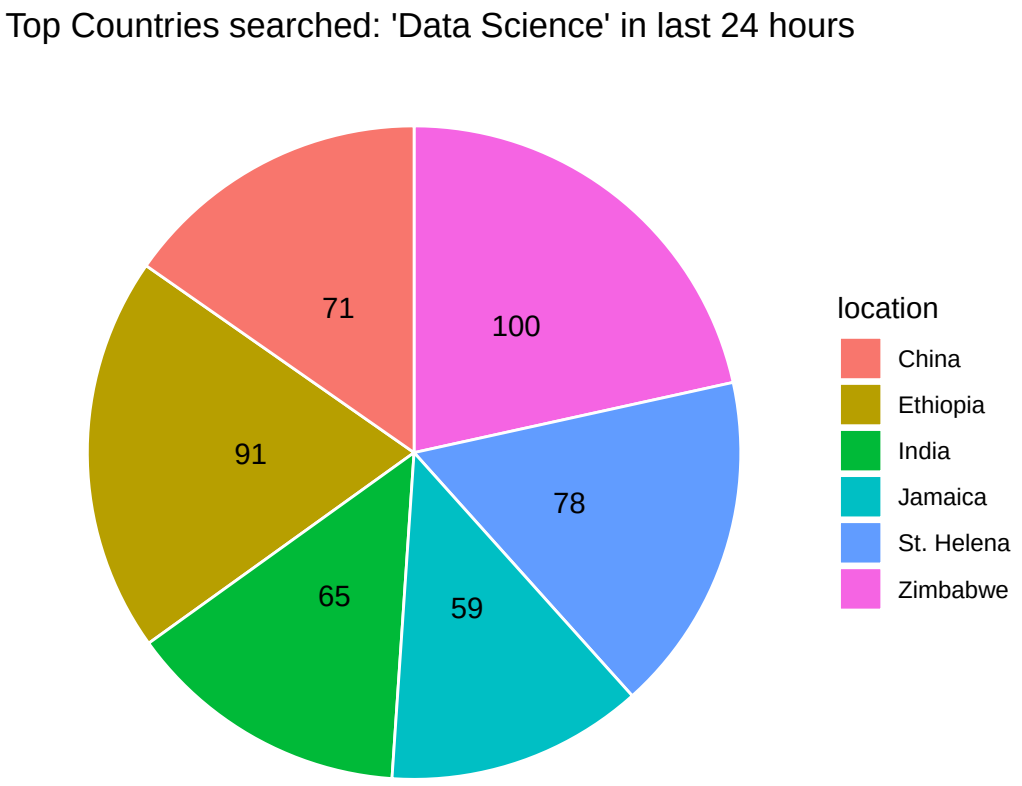

### Top Countries searching for "Data Science" in last 24 hours

```
getTopCountries <- function(keyword_, type_, time_){
  return (gtrends(keyword_, gprop = type_, time = time_)$interest_by_country)
}
topCounties <- getTopCountries(c("Data Science"), "web", "now 1-d")[0:10,]
print(topCounties)
```

```
##              location hits      keyword   geo gprop
## 1            Zimbabwe  100 Data Science world   web
## 2            Ethiopia   91 Data Science world   web
## 3         St. Helena    78 Data Science world   web
## 4               China   71 Data Science world   web
## 5              Malawi   NA Data Science world   web
## 6               India   65 Data Science world   web
## 7             Jamaica   59 Data Science world   web
## 8            Barbados   NA Data Science world   web
## 9            Botswana   NA Data Science world   web
## 10 Antigua & Barbuda   NA Data Science world   web
```

```
ggplot(topCounties, aes(x=0, y=hits, fill=location)) +
  labs(title = "Top Countries searched: 'Data Science' in last 24 hours") +
  geom_bar(stat="identity", width=1, color="white") +
```

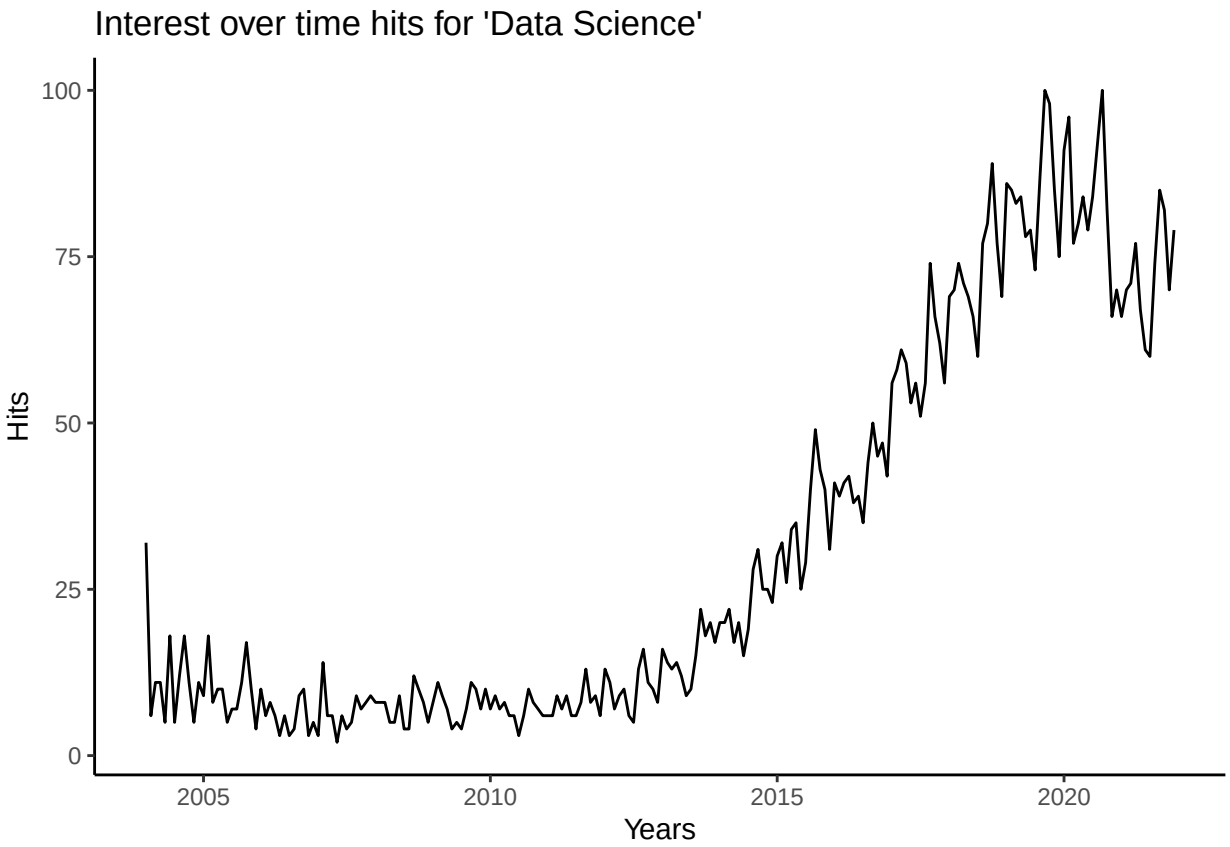
```
  coord_polar("y", start=0) +
  geom_text(aes(label = hits), position = position_stack(vjust = 0.5)) +
  theme_void()
```




### Interest over time hits for ‘Data Science’ in US

```
getIOT <- function(keyword_, type_, time_, geo_){
  return (gtrends(keyword_, gprop = type_, time = time_, geo = geo_)$interest_over_time)
}
lastFiveYears <- getIOT(c("Data Science"), "web", "all", "US")

theme_set(theme_classic())
ggplot(lastFiveYears, aes(x=date)) +
  geom_line(aes(y=hits)) +
  labs(title="Interest over time hits for 'Data Science'", y="Hits", x="Years")
```


Interest over time hits for 'Data Science'
Hits
100
75
50
25
0
2005
2010
2015
2020
Years