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20BCE0832

DATA VISUALIZATION LAB DA5

CODE

```
#
# This is a Shiny web application. You can run the application by clicking
# the 'Run App' button above.
#
# Find out more about building applications with Shiny here:
#
#    http://shiny.rstudio.com/
#
#CODE BY JATIN DHALL 20BCE0832
library(shiny)
library(ggplot2)
library("tm")
library("SnowballC")
library("wordcloud")
library("RColorBrewer")
library(DT)
library(shinydashboard)

# Define UI for application that draws a histogram
ui <- fluidPage(
    dashboardPage(
        dashboardHeader(title="Jatin Dhall 20BCE0832 DA"),
        dashboardSidebar(disable = TRUE),
        dashboardBody(
            box(
                title = "Daily confirmed Cases in Brazil and India(Jatin
Dhall)",
                solidHeader = TRUE,
                collapsible = TRUE,
                plotOutput("dailyConfirmedCases")
                ),
           box(
               title = "Daily Deaths in Brazil and India(Jatin Dhall)",
               solidHeader = TRUE,
               collapsible = TRUE,
               plotOutput("dailyDeaths")
               ),
           box(
               title = "Tag cloud of the inferences(Jatin Dhall)",
               solidHeader = TRUE,
```

```
                collapsible = TRUE,
                plotOutput("inferences")
                ),
            box(
                title = "Table containing  daily death per million population
and daily confirmed cases per
million population for India and Brazil(Jatin Dhall)",
                solidHeader = TRUE,
                collapsible = TRUE,
                DT::dataTableOutput("table")
                )
        )
    )
)

# Define server logic required to draw a histogram
server <- function(input, output) {
    df <- read.csv("C:\\Users\\Jatin Dhall\\Desktop\\Desktop
File\\VIT\\VIT\\SEM 3\\DATA VIZ\\LAB\\DA5\\covid-data-india-brazil.csv")
    print(head(df))

    output$dailyConfirmedCases <- renderPlot({
        # draw the histogram with the specified number of bins
        ggplot(df, aes(date, y = new_cases, fill = location)) +
            geom_bar(stat = "identity") +
            ggtitle("Daily Confirmed Cases vs Date Stacked bar chart(Jatin
Dhall)")
    })
    output$dailyDeaths <- renderPlot({

        ggplot(df, aes(date, y = new_deaths, fill = location)) +
            geom_bar(stat = "identity") +
            ggtitle("Daily Deaths vs Date Stacked bar chart(Jatin Dhall)")
    })

    output$inferences <- renderPlot({
        filePath <- "C:/Users/Jatin Dhall/Desktop/Desktop File/VIT/VIT/SEM
3/DATA VIZ/LAB/DA5/inferences.txt"
        text <- readLines(filePath)

        # Load the data as a corpus
        docs <- Corpus(VectorSource(text))

        inspect(docs)

        toSpace <- content_transformer(function (x , pattern ) gsub(pattern, "
", x))
        docs <- tm_map(docs, toSpace, "/")
```

```
        docs <- tm_map(docs, toSpace, "@")
        docs <- tm_map(docs, toSpace, "\\|")

        # Convert the text to lower case
        docs <- tm_map(docs, content_transformer(tolower))
        # Remove numbers
        docs <- tm_map(docs, removeNumbers)
        # Remove english common stopwords
        docs <- tm_map(docs, removeWords, stopwords("english"))
        # Remove punctuations
        docs <- tm_map(docs, removePunctuation)
        # Eliminate extra white spaces
        docs <- tm_map(docs, stripWhitespace)
        # Text stemming
        # docs <- tm_map(docs, stemDocument)

        dtm <- TermDocumentMatrix(docs)
        m <- as.matrix(dtm)
        v <- sort(rowSums(m),decreasing=TRUE)
        d <- data.frame(word = names(v),freq=v)
        head(d, 10)

        set.seed(1234)
        wordcloud(words = d$word, freq = d$freq, min.freq = 1,
                  max.words=200, random.order=FALSE, rot.per=0.35,
                  main = "Tag Cloud with Inference",colors=brewer.pal(8,
"Dark2"))

    })
    #Death and Confirmed Cases per million in a table
    date <- df$date
    dailycases <- df$new_cases/1000000
    dailydeaths <- df$new_deaths/1000000

    df1 <-data.frame (date,dailycases,dailydeaths)

    output$table = DT::renderDataTable({
        df1
    })

}

# Run the application
shinyApp(ui = ui, server = server)
```

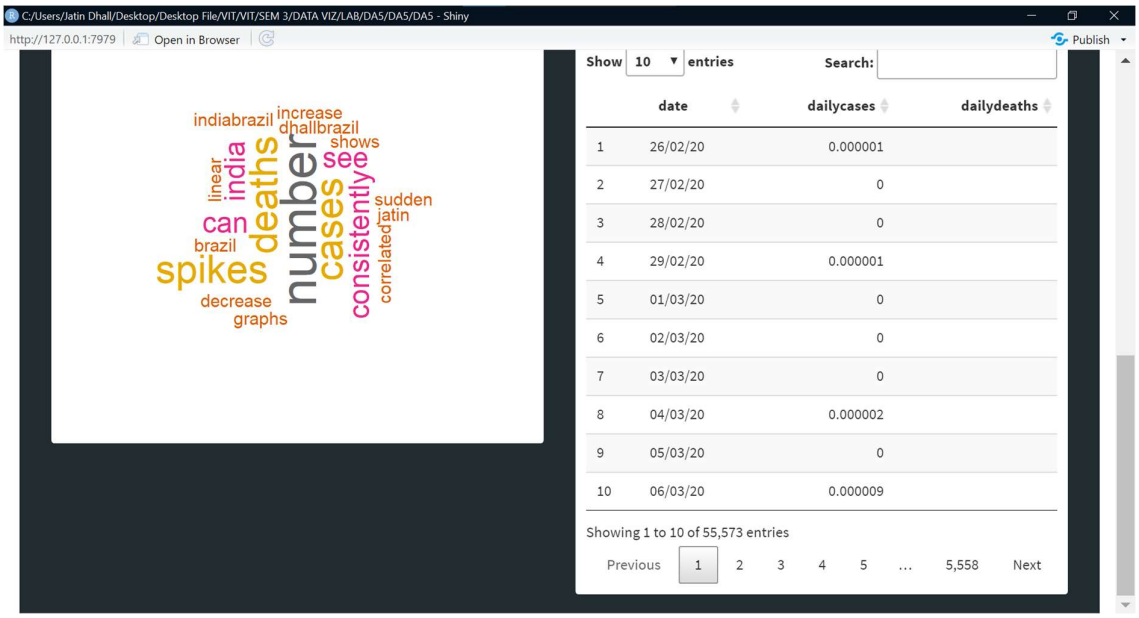
INFERENCE

(Inference added in a particular text file on my machine)

Jatin Dhall.Brazil consistently has more cases than India.Brazil consistently has more deaths than India.With spikes in number of cases, we can see spikes in number of deaths, which shows that they are correlated.There is no linear increase or decrease in the number of deaths for brazil and india.We can see sudden spikes in number of cases from the graphs

OUTPUTS IN DASHBOARD

Daily deaths are shown in other pages of the table, just that in this part, the data is being shown as NA


C:/Users/Jatin Dhall/Desktop/Desktop File/VIT/VIT/SEM 3/DATA VIZ/LAB/DA5/DA5/DA5 - Shiny
http://127.0.0.1:7979
Open in Browser
Publish
indiabrazil
increase
dhallbrazil
shows
linear
india
deaths
see
number
cases
consistently
sudden
jatin
correlated
can
brazil
spikes
decrease
graphs
Show 10 entries
Search:
date
dailycases
dailydeaths
1 26/02/20 0.000001
2 27/02/20 0
3 28/02/20 0
4 29/02/20 0.000001
5 01/03/20 0
6 02/03/20 0
7 03/03/20 0
8 04/03/20 0.000002
9 05/03/20 0
10 06/03/20 0.000009
Showing 1 to 10 of 55,573 entries
Previous 1 2 3 4 5 … 5,558 Next