JATIN DHALL

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





