# PAIRED T TEST USING R

DATA SCIENCE MODELING IN R PROJECT

OCTOBER 21, 2021

GANPAT UNIVERSITY
SEMESTER 5 PROJECT

This project under our Professor Dhaval Sathvara in Institute of computer technology – Ganpat University in Semester 5 and Subject Name :- Data Science Modeling in R.

URL :- https://smitrpatel.shinyapps.io/Project/

The project done by

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CODE :-

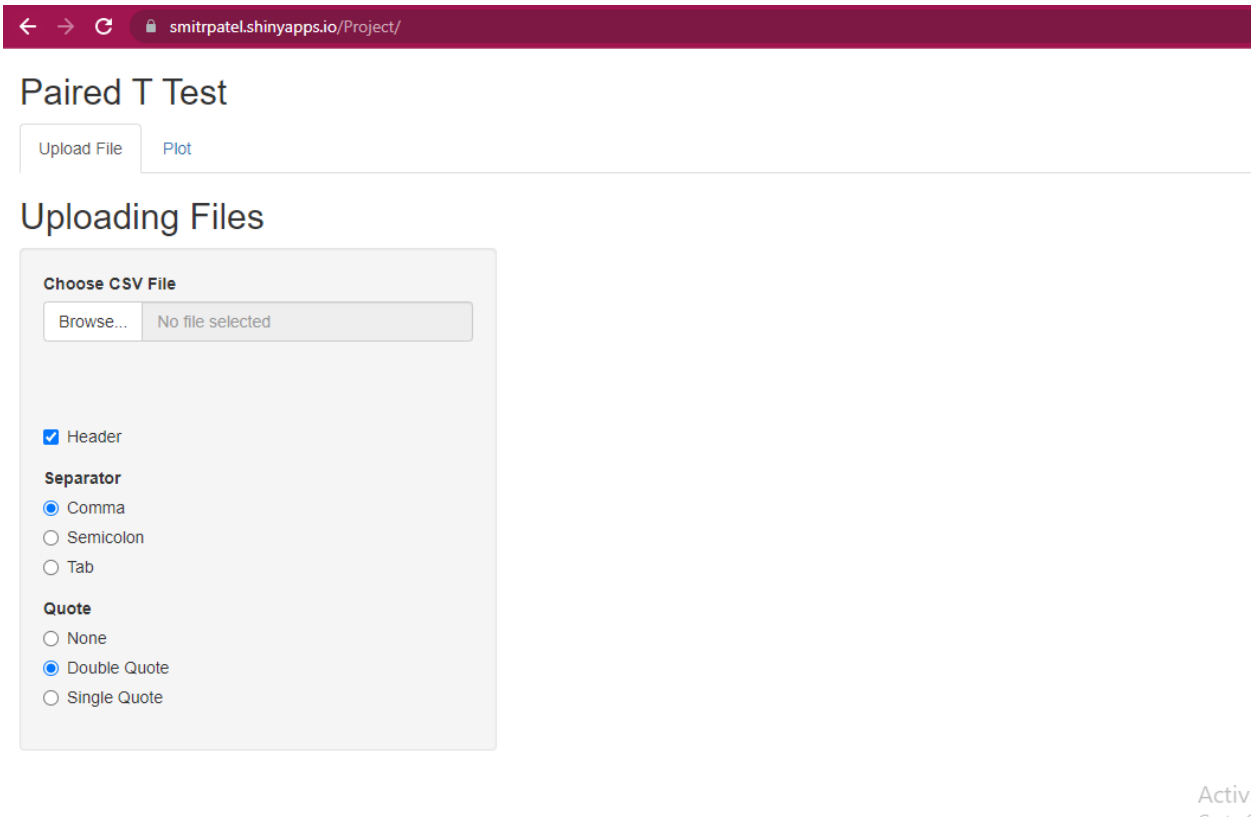
```
library(shiny)
library(datasets)

ui <- shinyUI(fluidPage(
 titlePanel("Paired T Test"),
 tabsetPanel(
  tabPanel("Upload File",
          titlePanel("Uploading Files"),
          sidebarLayout(
           sidebarPanel(
            fileInput('file1', 'Choose CSV File',
                    accept=c('text/csv',
                          'text/comma-separated-values,text/plain',
                          '.csv')),

            # added interface for uploading data from
            # http://shiny.rstudio.com/gallery/file-upload.html
            tags$br(),
            checkboxInput('header', 'Header', TRUE),
            radioButtons('sep', 'Separator',
                       c(Comma=',',
                         Semicolon=';',
                         Tab='\t'),
                       ','),
            radioButtons('quote', 'Quote',
                       c(None='',
                         'Double Quote'='"',
                         'Single Quote'="'"),
```

```
                    '"')


          ),
          mainPanel(
            tableOutput('contents')
          )
        )
    ),
    tabPanel("Plot",
        pageWithSidebar(
          headerPanel('Scatter Plot'),
          sidebarPanel(

            # "Empty inputs" - they will be updated after the data is uploaded
            selectInput('xcol', 'X Variable', ""),
            selectInput('ycol', 'Y Variable', "", selected = "")

          ),
          mainPanel(
            plotOutput('MyPlot')
          )
        )
    )

  )
)
)

server <- shinyServer(function(input, output, session) {
```

```
# added "session" because updateSelectInput requires it


data <- reactive({
  req(input$file1) ## ?req #  require that the input is available

  inFile <- input$file1

  # tested with a following dataset: write.csv(mtcars, "mtcars.csv")
  # and                            write.csv(iris, "iris.csv")
  df <- read.csv(inFile$datapath, header = input$header, sep = input$sep,
                 quote = input$quote)


  # Update inputs (you could create an observer with both updateSel...)
  # You can also constraint your choices. If you wanted select only numeric
  # variables you could set "choices = sapply(df, is.numeric)"
  # It depends on what do you want to do later on.

  updateSelectInput(session, inputId = 'xcol', label = 'X Variable',
                    choices = names(df), selected = names(df))
  updateSelectInput(session, inputId = 'ycol', label = 'Y Variable',
                    choices = names(df), selected = names(df)[2])

  return(df)
})

output$contents <- renderTable({
  data()
```

```
  })

  output$MyPlot <- renderPlot({
    # for a histogram: remove the second variable (it has to be numeric as well):
    # x    <- data()[, c(input$xcol, input$ycol)]
    # bins <- nrow(data())
    # hist(x, breaks = bins, col = 'darkgray', border = 'white')

    # Correct way:
    # x    <- data()[, input$xcol]
    # bins <- nrow(data())
    # hist(x, breaks = bins, col = 'darkgray', border = 'white')


    # I Since you have two inputs I decided to make a scatterplot
    x <- data()[, c(input$xcol, input$ycol)]
    plot(x)

  })
})

shinyApp(ui, server)
```

OUTPUT :-


smitrpatel.shinyapps.io/Project/
Paired T Test
Upload File
Plot
Uploading Files
Choose CSV File
Browse...
No file selected
Header
Separator
Comma
Semicolon
Tab
Quote
None
Double Quote
Single Quote


# Paired T Test

Upload File | Plot

## Uploading Files

**Choose CSV File**

Browse... 1.csv

Upload complete

Header

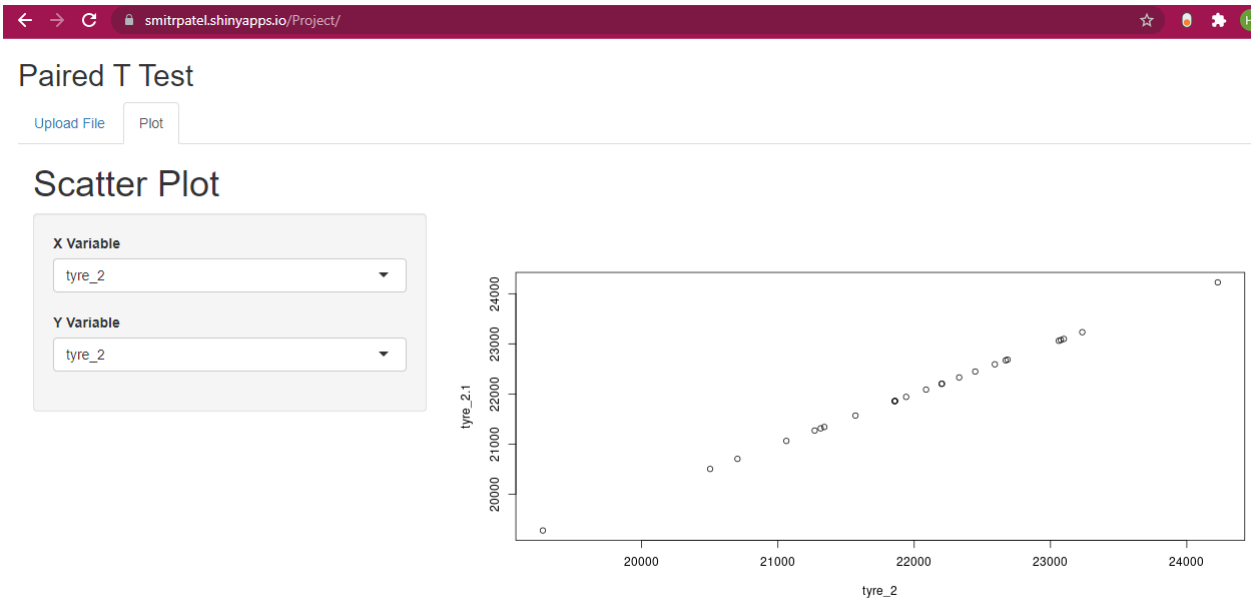
**Separator**

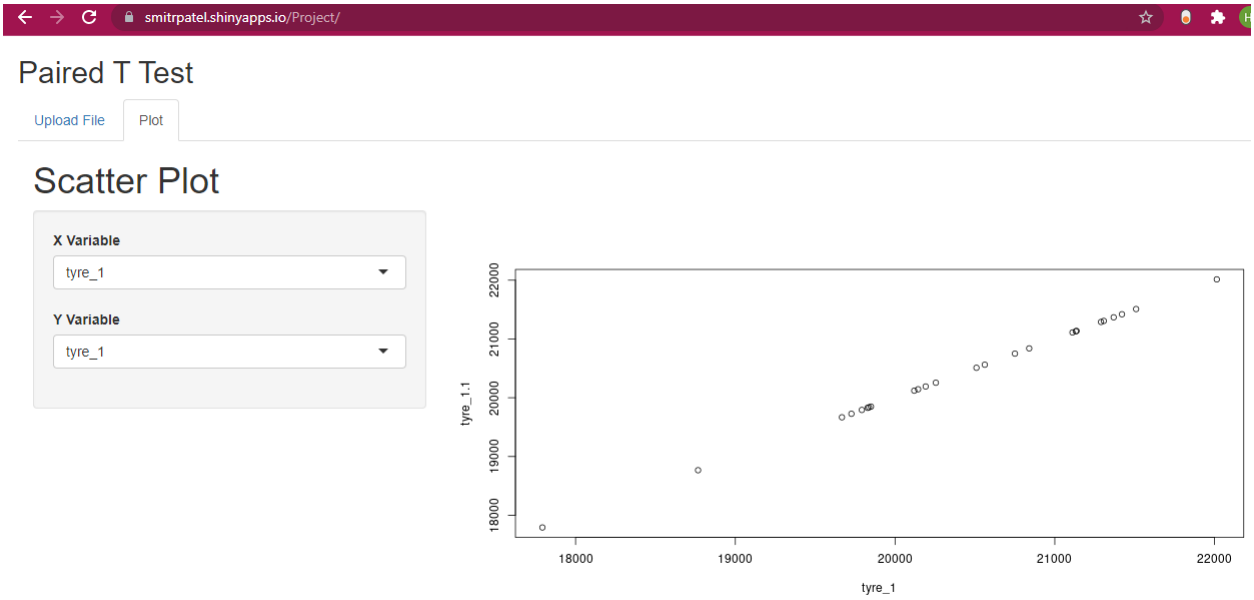
- Comma
- Semicolon
- Tab

**Quote**

- None
- Double Quote
- Single Quote

| tyre_1 | tyre_2 |
|---|---|
| 19849.13 | 21269.83 |
| 19836.81 | 23076.43 |
| 20750.42 | 21859.52 |
| 20191.55 | 24227.20 |
| 21131.22 | 21940.67 |
| 20120.14 | 21313.80 |
| 19726.70 | 22086.81 |
| 20561.69 | 21859.07 |
| 21289.19 | 19275.01 |
| 21420.56 | 23060.54 |
| 21306.78 | 22591.71 |
| 19667.48 | 22685.07 |
| 20144.26 | 21340.41 |
| 20839.78 | 20502.47 |
| 20255.30 | 23233.12 |
| 18766.76 | 21855.60 |




Conclusion :- In this project we learn paired t test , and hence this line show linear line and our output show in same line. So we upload on internet and learn many things using this project in data science subject.

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