MATH2404 TP6, 2020

Assignment 2

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Provide the packages required to reproduce the report. Make sure you fulfilled the minimum requirement explained in step #11.

# This is an R chunk for required packages  
#install.packages("CRAN")  
#install.packages("stringr")  
library(base) #for string manipulation  
library(readr) # Useful for importing data  
library(foreign) # Useful for importing SPSS, SAS, STATA etc. data files  
library(rvest) # Useful for scraping HTML data

## Loading required package: xml2

##   
## Attaching package: 'rvest'

## The following object is masked from 'package:readr':  
##   
## guess\_encoding

library(knitr) # Useful for creating nice tables  
library(tidyr) #The goal of tidyr is to help you create tidy data.  
library(shiny) #Shiny is an R package that makes it easy to build interactive web apps straight from R.  
library(readxl) #useful for reading xls files  
library(gdata) # Various R Programming Tools for Data Manipulation

## gdata: read.xls support for 'XLS' (Excel 97-2004) files ENABLED.

##

## gdata: read.xls support for 'XLSX' (Excel 2007+) files ENABLED.

##   
## Attaching package: 'gdata'

## The following object is masked from 'package:stats':  
##   
## nobs

## The following object is masked from 'package:utils':  
##   
## object.size

## The following object is masked from 'package:base':  
##   
## startsWith

library(dplyr) #useful for data manipulation

##   
## Attaching package: 'dplyr'

## The following objects are masked from 'package:gdata':  
##   
## combine, first, last

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

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

library("tinytex")   
library(deductive)  
library(validate)

##   
## Attaching package: 'validate'

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

library(Hmisc)

## Loading required package: lattice

## Loading required package: survival

## Loading required package: Formula

## Loading required package: ggplot2

##   
## Attaching package: 'ggplot2'

## The following object is masked from 'package:validate':  
##   
## expr

## This version of Shiny is designed to work with 'htmlwidgets' >= 1.5.  
## Please upgrade via install.packages('htmlwidgets').

##   
## Attaching package: 'Hmisc'

## The following objects are masked from 'package:validate':  
##   
## label, label<-

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

## The following object is masked from 'package:rvest':  
##   
## html

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

library(outliers)  
library(infotheo)  
library(mlr)

## Loading required package: ParamHelpers

## 'mlr' is in maintenance mode since July 2019. Future development  
## efforts will go into its successor 'mlr3'  
## (<https://mlr3.mlr-org.com>).

##   
## Attaching package: 'mlr'

## The following object is masked from 'package:Hmisc':  
##   
## impute

## The following object is masked from 'package:gdata':  
##   
## resample

library(ggplot2)  
library(knitr)

library(rsconnect)

##   
## Attaching package: 'rsconnect'

## The following object is masked from 'package:shiny':  
##   
## serverInfo

library(shiny)  
library(ggplot2)  
library(dplyr)  
mydata <- read.csv("acoholsales.csv", stringsAsFactors = F)  
head(mydata)

## Country Product Type Price  
## 1 Australia TROEGS HOPBACK ALE 4/6 NR - 12OZ BEER 20  
## 2 Australia DOGFISH HEAD 120 MIN IPA 6/4 NR - 12OZ BEER 20  
## 3 Australia CUSQUENA BEER-PERU 4/6 NR - 12OZ BEER 20  
## 4 Australia TROEGS TROEGENATOR DOUBLE 4/6 NR - 12OZ BEER 20  
## 5 Australia HEAVY SEAS POWDER MONKEY P/A 4/6 NR - 12OZ BEER 20  
## 6 Australia MIKES LEMONADE 4/6 NR - 11.2OZ BEER 20  
## Alcohol\_Content  
## 1 4.5  
## 2 4.5  
## 3 4.5  
## 4 4.5  
## 5 4.5  
## 6 4.5

ui <- fluidPage(  
 titlePanel("Alcoholprices"),  
 sidebarLayout(  
 sidebarPanel(  
 sliderInput("priceInput", "Price", 0, 100, c(25, 40), pre = "$"),  
 radioButtons("typeInput", "Product type",  
 choices = c("BEER", "REFRESHMENT", "SPIRITS", "WINE"),  
 selected = "WINE"),  
 uiOutput("countryOutput")  
 ),  
 mainPanel(  
 plotOutput("coolplot"),  
 br(), br(),  
 tableOutput("results")  
 )  
 )  
)  
  
server <- function(input, output) {  
 output$countryOutput <- renderUI({  
 selectInput("countryInput", "Country",  
 sort(unique(mydata$Country)),  
 selected = "Australia")  
 })   
   
 filtered <- reactive({  
 if (is.null(input$countryInput)) {  
 return(NULL)  
 }   
   
 mydata %>%  
 filter(Price >= input$priceInput[1],  
 Price <= input$priceInput[2],  
 Type == input$typeInput,  
 Country == input$countryInput  
 )  
 })  
   
 output$coolplot <- renderPlot({  
 if (is.null(filtered())) {  
 return()  
 }  
 #ggplot(filtered(), aes(Alcohol\_Content)) +  
 # geom\_histogram()  
#installed.packages("ggforce")  
#library(ggforce)  
ggplot(mydata, aes(Type, Alcohol\_Content, colour = Country)) +  
 geom\_point()   
# facet\_zoom(x = Country == "Australia")  
   
 })  
   
 output$results <- renderTable({  
 filtered()  
 })  
}  
# Run the application  
shinyApp(ui = ui, server = server)

## PhantomJS not found. You can install it with webshot::install\_phantomjs(). If it is installed, please make sure the phantomjs executable can be found via the PATH variable.

Shiny applications not supported in static R Markdown documents