Run App

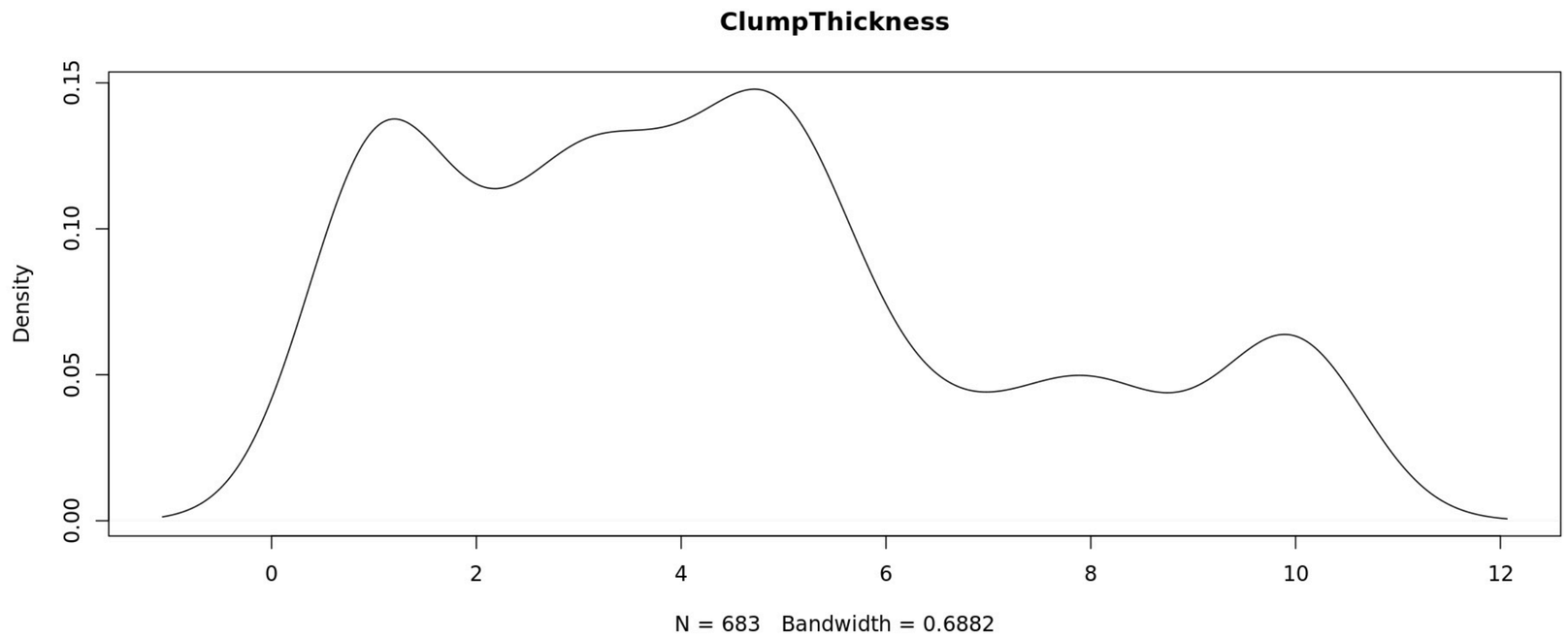
```r
library(shiny)

vars <- c("ClumpThickness",
          "UniformityOfCellSize",
          "UniformityOfCellShape",
          "MarginalAdhesion",
          "SingleEpithelialCellSize")

ui <- fluidPage(
  pageWithSidebar(
    headerPanel('Density of Breast Cancer Wisconsin Data Set'),

    sidebarPanel(
      selectInput('xcol', 'Variable', vars)
    ),

    mainPanel(
      plotOutput('plot1')
    )
  )
)
```

```r
library(stringr)

dat <- read.table("breast-cancer-wisconsin.data")

ClumpThickness <- vector(mode="numeric")
UniformityOfCellSize <- vector(mode="numeric")
UniformityOfCellShape <- vector(mode="numeric")
MarginalAdhesion <- vector(mode="numeric")
SingleEpithelialCellSize <- vector(mode="numeric")

for(i in 1:length(dat[[1]])) {
  vec <- strtoi(str_extract_all(dat[[1]][i], "\\d+\\b")[[1]])
  # dupm rows that contain missing values
  if(length(vec) == 11) {
    # use 5 variables
    ClumpThickness[length(ClumpThickness)+1] <- vec[2]
    UniformityOfCellSize[length(UniformityOfCellSize)+1] <- vec[3]
    UniformityOfCellShape[length(UniformityOfCellShape)+1] <- vec[4]
    MarginalAdhesion[length(MarginalAdhesion)+1] <- vec[5]
    SingleEpithelialCellSize[length(SingleEpithelialCellSize)+1] <- vec[6]
  }
}

df <- data.frame("ClumpThickness"=ClumpThickness,
                 "UniformityOfCellSize"=UniformityOfCellSize,
                 "UniformityOfCellShape"=UniformityOfCellShape,
                 "MarginalAdhesion"=MarginalAdhesion,
                 "SingleEpithelialCellSize"=SingleEpithelialCellSize)

server <- function(input, output, session) {
  # Combine the selected variables into a new data frame
  selectedData <- reactive({
    df[, input$xcol]
  })

  output$plot1 <- renderPlot({
    palette(c("#E41A1C", "#377EB8", "#4DAF4A", "#984EA3",
      "#FF7F00", "#FFFF33", "#A65628", "#F781BF", "#999999"))

    par(mar = c(5.1, 4.1, 4.1, 1))

    plot(density(selectedData()),
         main=input$xcol)
  })
}
```

Density of Breast Cancer Wisconsin Data Set

Variable

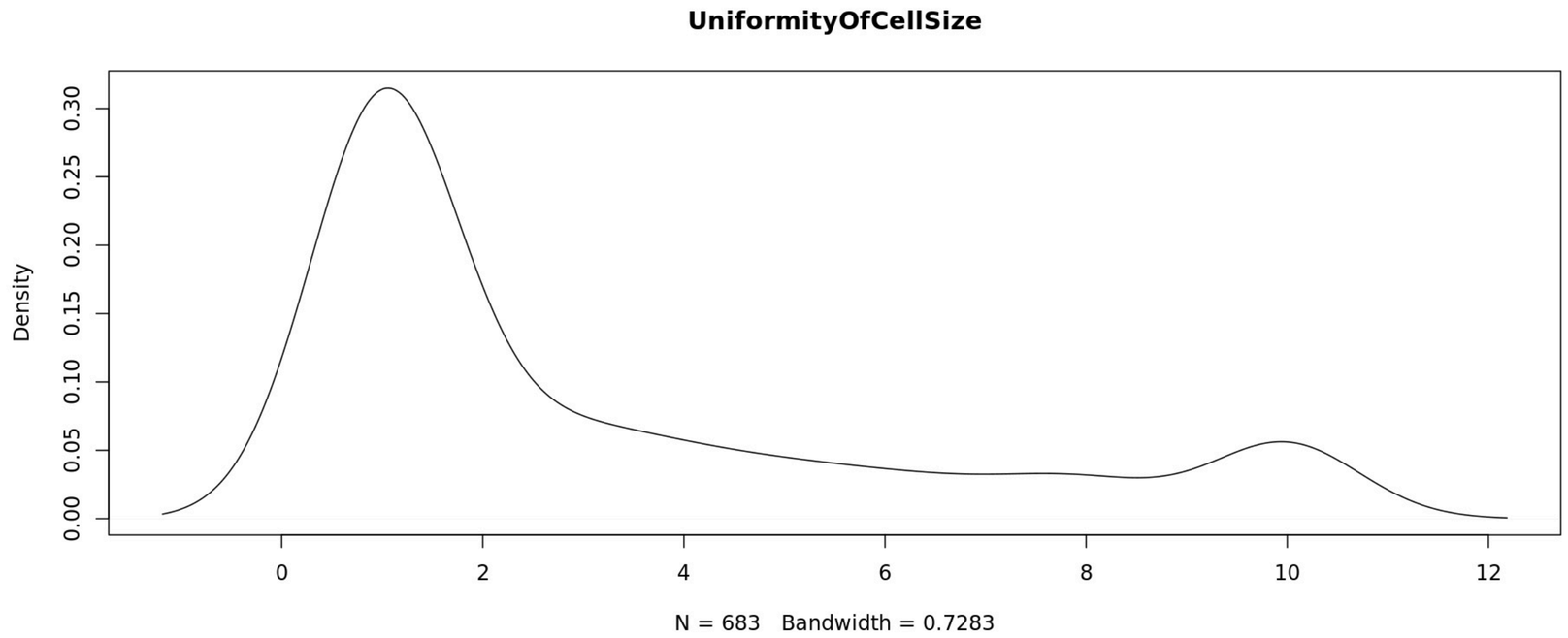
ClumpThickness



Density of Breast Cancer Wisconsin Data Set

Variable

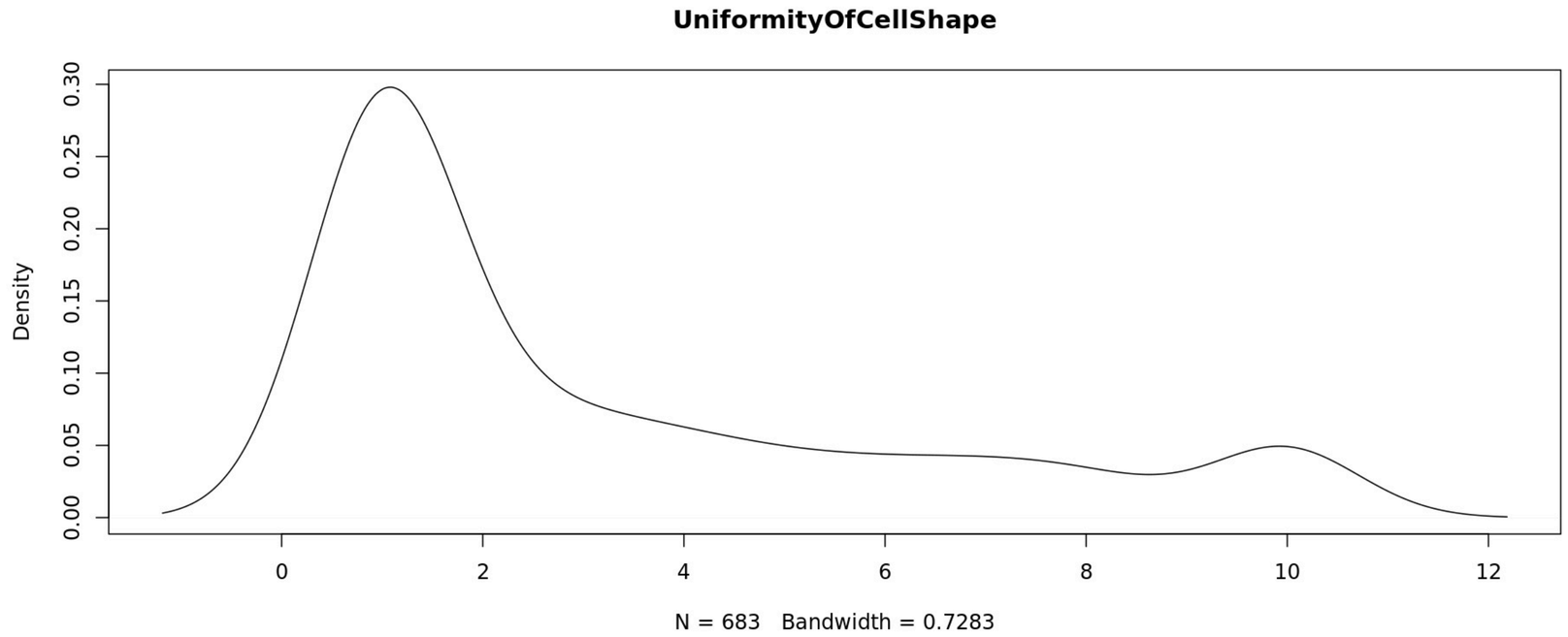
UniformityOfCellSize



Density of Breast Cancer Wisconsin Data Set

Variable

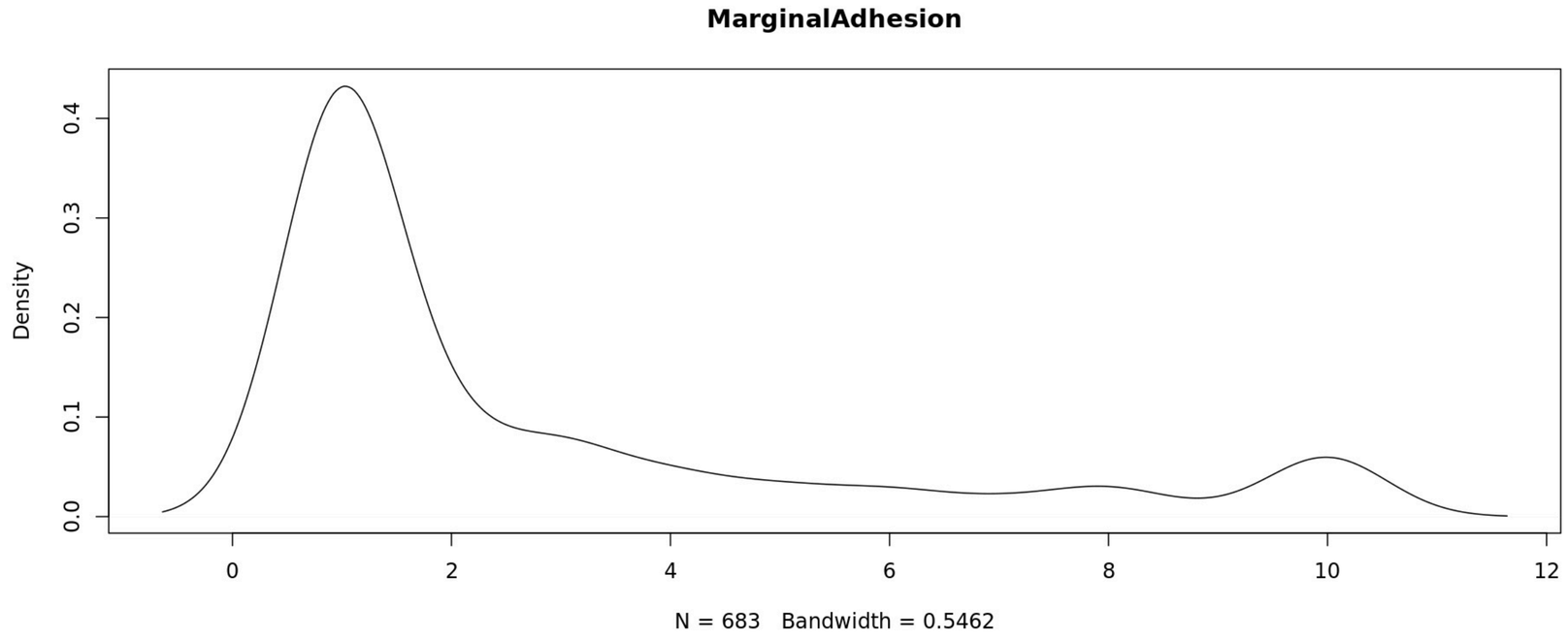
UniformityOfCellShape



Density of Breast Cancer Wisconsin Data Set

Variable

MarginalAdhesion



Density of Breast Cancer Wisconsin Data Set

Variable

SingleEpithelialCellSize