BUILDING WEB APPLICATIONS IN R WITH SHINY

# User interface

# Anatomy of a Shiny app

```
library(shiny)
library("movies.Rdata")
ui <- fluidPage()


server <- function(input, output) {}


shinyApp(ui = ui, server = server)
```

**User interface**
- Inputs defined and laid out
- Outputs laid out

**Server function**
- Outputs calculated
- Any other calculations needed for outputs are performed

**server**

```
ggplot(data = movies, aes_string(x = input$x, y = input$y)) +
  geom_point()
```

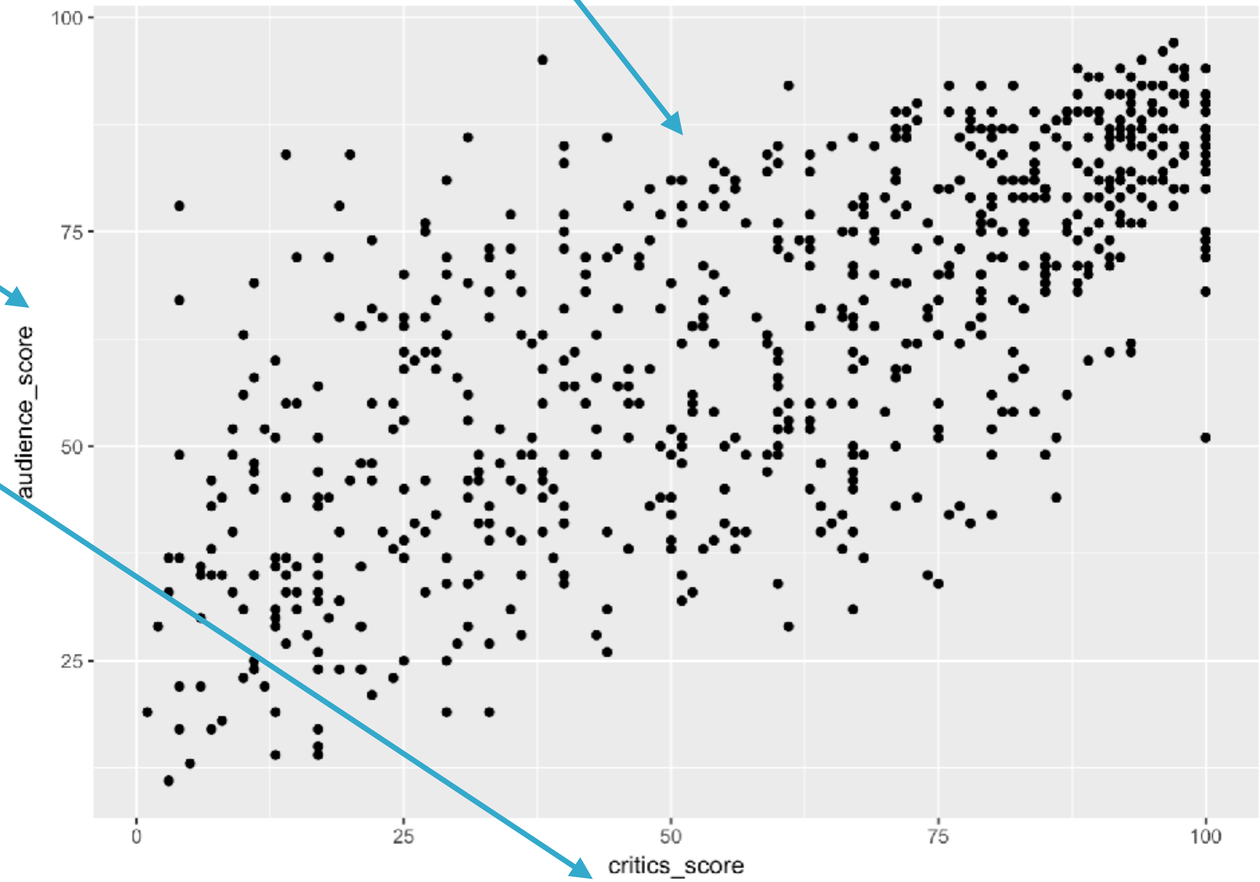
**ui**

Y-axis:

audience_score

X-axis:

critics_score

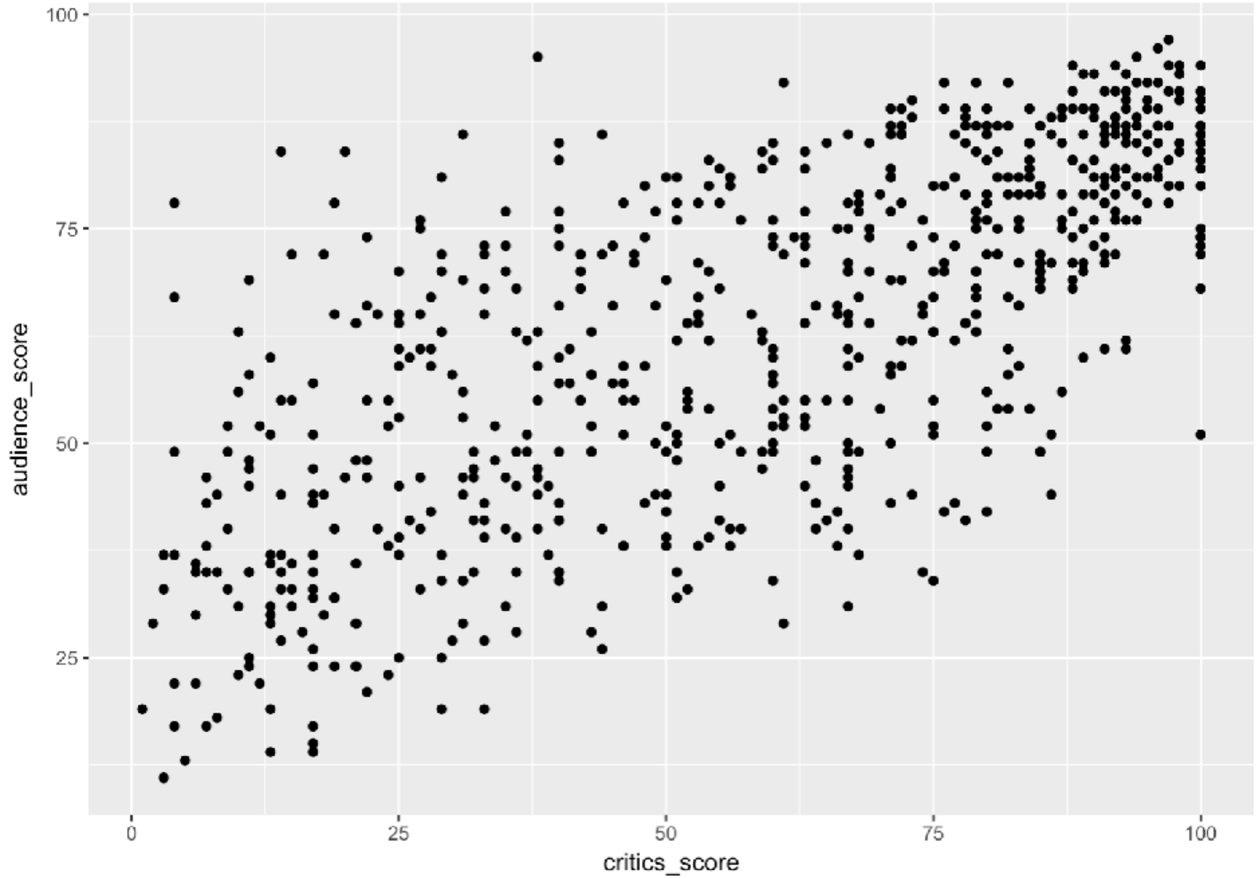


**Y-axis:**

audience_score

**X-axis:**

critics_score



```
# Define UI for application that plots features of movies
ui <- fluidPage(

  # Sidebar layout with a input and output definitions
  sidebarLayout(
    # Inputs: Select variables to plot
    sidebarPanel(
      # Select variable for y-axis
      selectInput(inputId = "y", label = "Y-axis:",
                  choices = c("imdb_rating", "imdb_num_votes", "critics_score", "audience_score", "runtime"),
                  selected = "audience_score"),
      # Select variable for x-axis
      selectInput(inputId = "x", label = "X-axis:",
                  choices = c("imdb_rating", "imdb_num_votes", "critics_score", "audience_score", "runtime"),
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    ),

    # Output: Show scatterplot
    mainPanel(
      plotOutput(outputId = "scatterplot")
    )
  )
)
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Create fluid page layout

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Create a layout with a sidebar and main area

## sidebarPanel

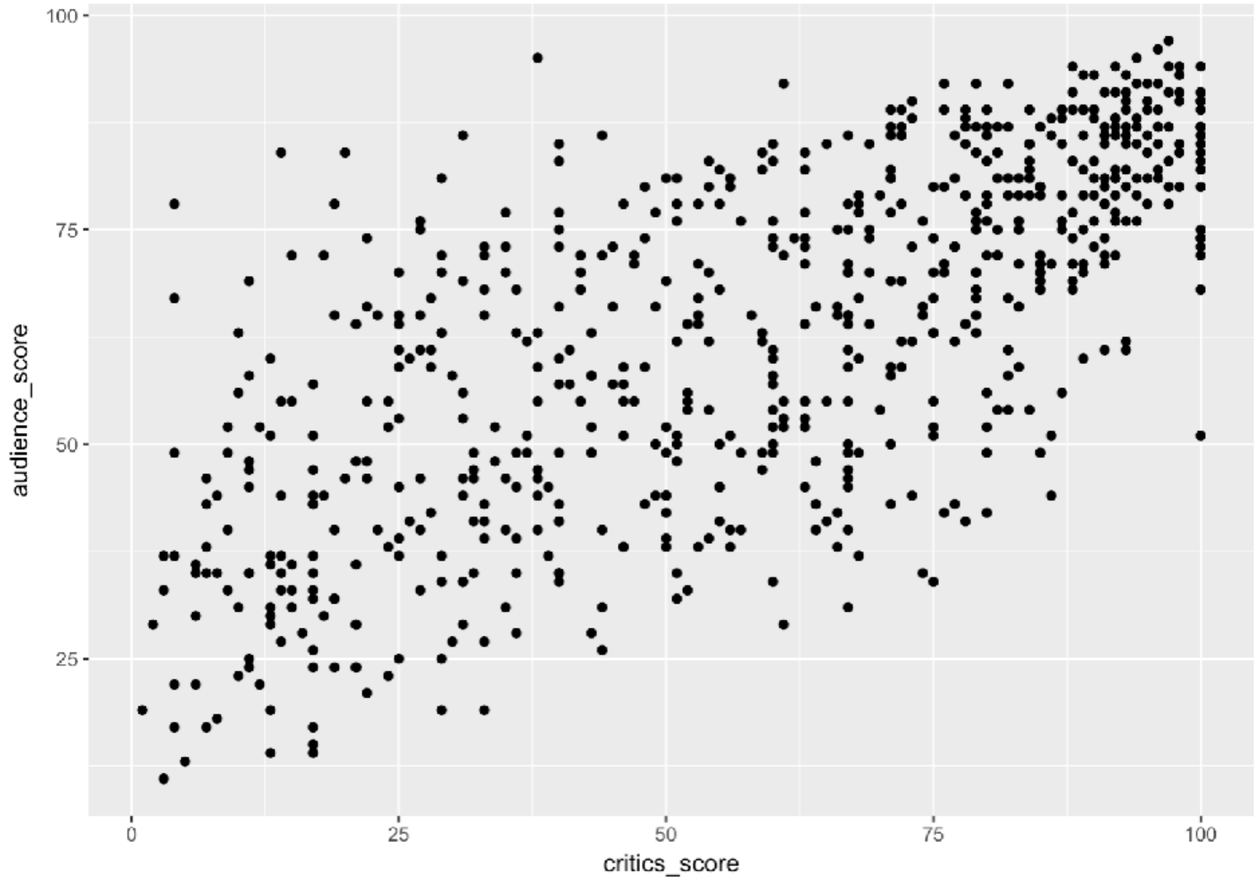
**Y-axis:**

audience_score

**X-axis:**

critics_score

## mainPanel



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Create a sidebar panel containing **input** controls

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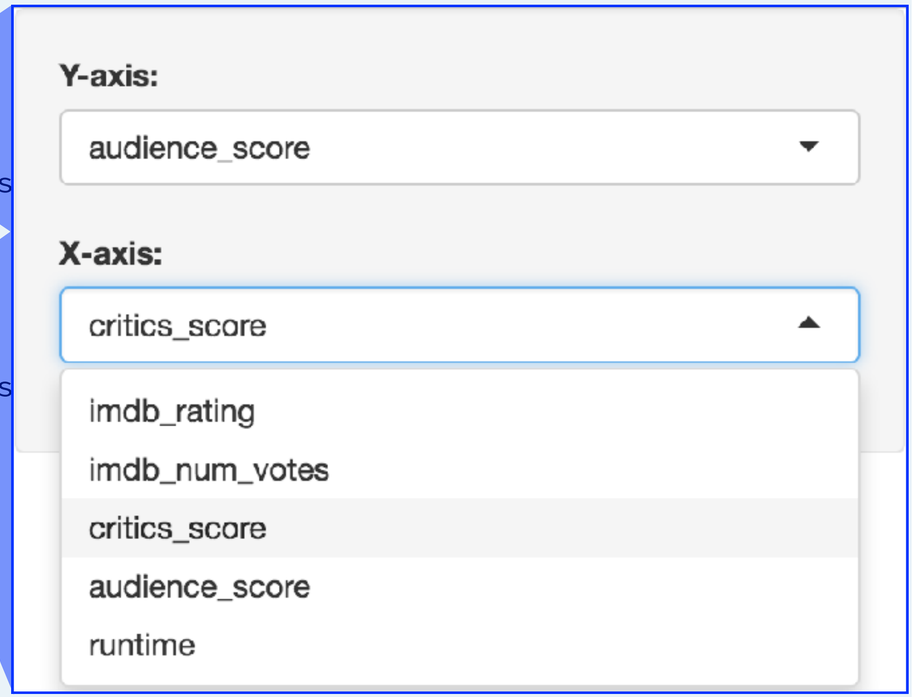

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Create a main panel containing **output** elements that get created in the server function

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# Let's practice!