BUILDING WEB APPLICATIONS IN R WITH SHINY

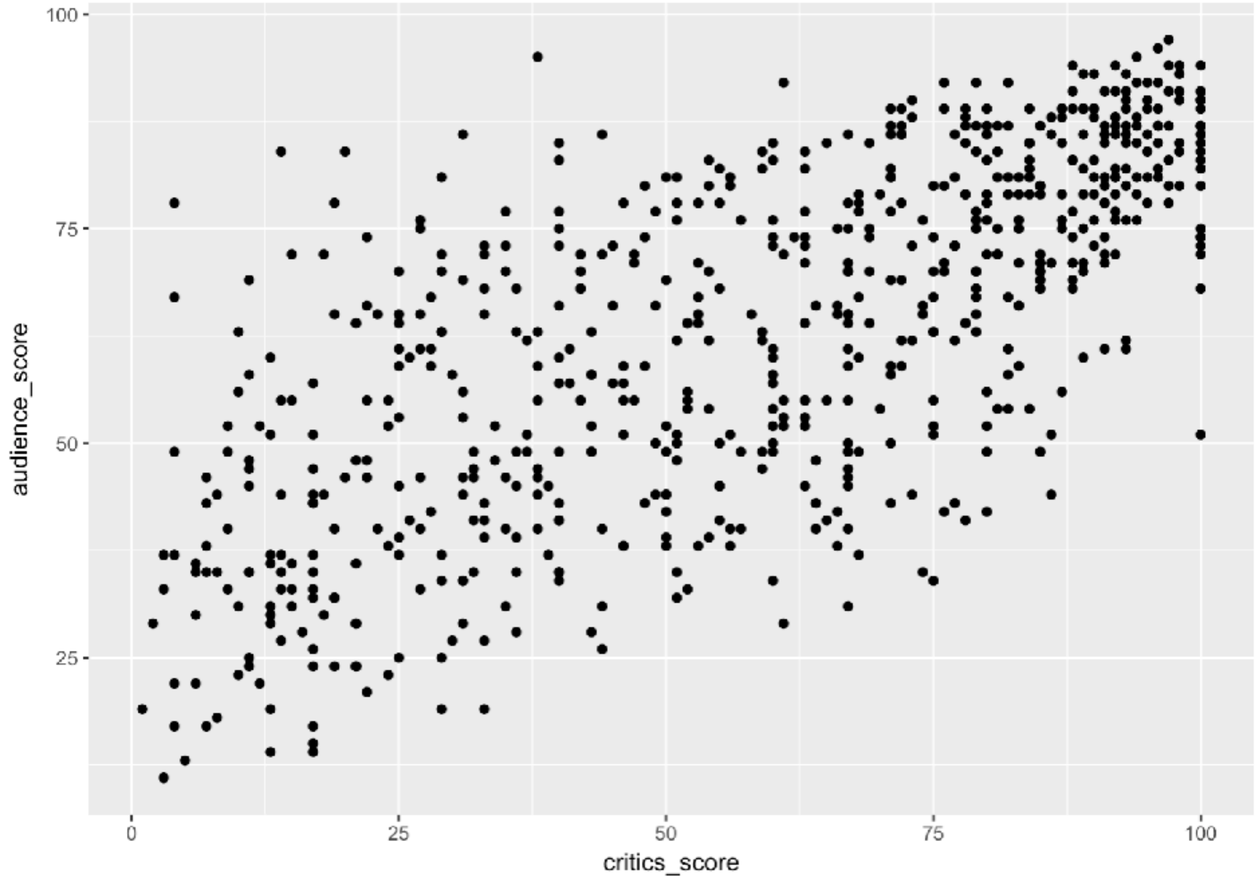
UI inputs

Y-axis:

audience_score

X-axis:

critics_score



Inputs

collect values from the user

Access the current value of an input object with **input$<inputId>**. Input values are **reactive**.

Action — **actionButton**(inputId, label, icon, …)

Link — **actionLink**(inputId, label, icon, …)

Choice 1
Choice 2
Choice 3 — **checkboxGroupInput**(inputId, label, choices, selected, inline)

Check me — **checkboxInput**(inputId, label, value)

dateInput(inputId, label, value, min, max, format, startview, weekstart, language)

dateRangeInput(inputId, label, start, end, min, max, format, startview, weekstart, language, separator)

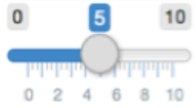
Choose File — **fileInput**(inputId, label, multiple, accept)

1 — **numericInput**(inputId, label, value, min, max, step)

•••••••• — **passwordInput**(inputId, label, value)

Choice A
Choice B
Choice C — **radioButtons**(inputId, label, choices, selected, inline)

Choice 1
Choice 1
Choice 2 — **selectInput**(inputId, label, choices, selected, multiple, selectize, width, size) (also selectizeInput())



sliderInput(inputId, label, min, max, value, step, round, format, locale, ticks, animate, width, sep, pre, post)

Apply Changes — **submitButton**(text, icon)
(Prevents reactions across entire app)

Enter text — **textInput**(inputId, label, value)

checkboxInput

Add a checkbox input to specify whether the data plotted should be shown in a data table.

1. **ui:** Add an input widget that the user can interact with to check/uncheck the box.
2. **ui:** Add an output defining where the data table should appear.
3. **server:** Add a reactive expression that creates the data table *if* the checkbox is checked.

checkboxInput

Add a checkbox input to specify whether the data plotted should be shown in a data table.

1. **ui:** Add an input widget that the user can interact with to check/uncheck the box.

```
# Show data table
checkboxInput(inputId = "show_data",
              label = "Show data table",
              value = TRUE)
```

Watch for commas!

```
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"),
                  selected = "critics_score"),
      # Show data table
      checkboxInput(inputId = "show_data",
                    label = "Show data table",
                    value = TRUE)
    )
```

checkboxInput

Add a checkbox input to specify whether the data plotted should be shown in a data table.

2. **ui:** Add an output to the UI defining where the data table should appear.

```
mainPanel(
  # Show scatterplot
  plotOutput(outputId = "scatterplot"),
  # Show data table
  DT::dataTableOutput(outputId = "moviestable")
)
```

checkboxInput

Add a checkbox input to specify whether the data plotted should be shown in a data table.

3. **server:** Add a reactive expression that creates the data table *if* the checkbox is checked.

```
# Print data table if checked
output$moviestable <- DT::renderDataTable({
  if(input$show_data){
    DT::datatable(data = movies %>% select(1:7),
    options = list(pageLength = 10),
    rownames = FALSE)
  }
})
```

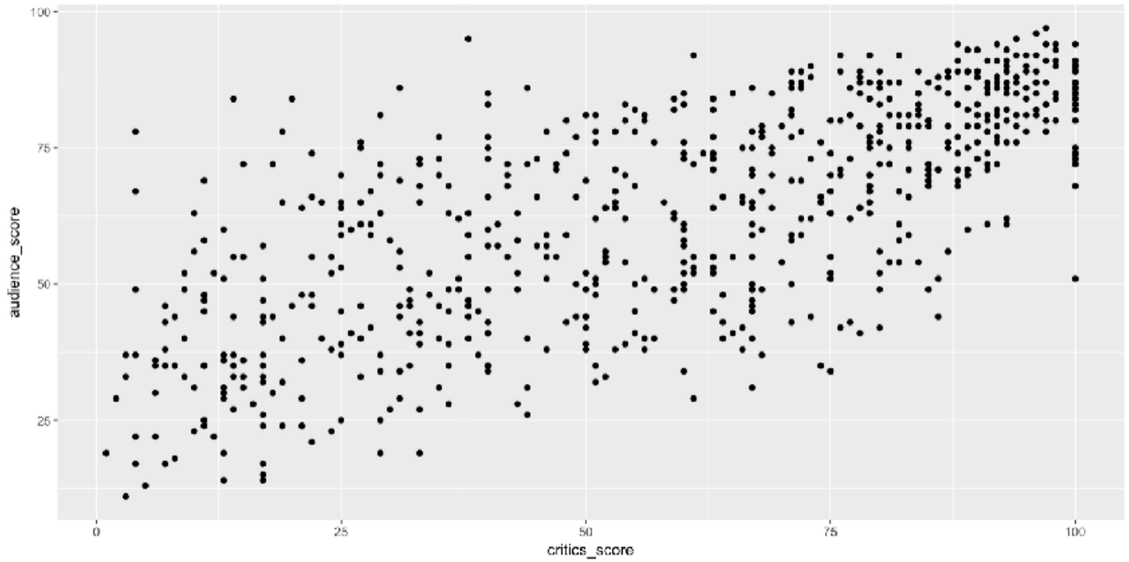
Y-axis:

audience_score

X-axis:

critics_score

Show data table



Show 10 entries

Search:

title	title_type	genre	runtime	mpaa_rating	studio	thtr_rel_date
Filly Brown	Feature Film	Drama	80	R	Indomina Media Inc.	2013-04-19T04:00:00Z
The Dish	Feature Film	Drama	101	PG-13	Warner Bros. Pictures	2001-03-14T05:00:00Z
Waiting for Guffman	Feature Film	Comedy	84	R	Sony Pictures Classics	1996-08-21T04:00:00Z
The Age of Innocence	Feature Film	Drama	139	PG	Columbia Pictures	1993-10-01T04:00:00Z
Malevolence	Feature Film	Horror	90	R	Anchor Bay Entertainment	2004-09-10T04:00:00Z

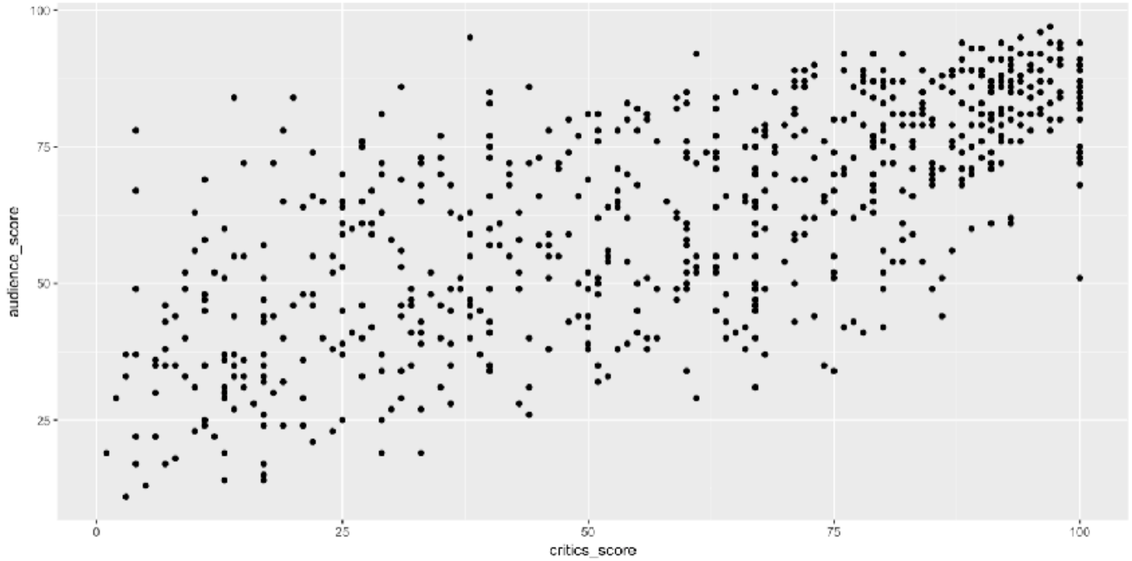
Y-axis:

audience_score

X-axis:

critics_score

Show data table



Scoping

- We saw that the data loaded on top of the Shiny app is visible to the server.
- It is also visible to the UI.

```
# Display number of observations
HTML(paste0("The dataset has ", nrow(movies),
            “observations."))
```

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Let's practice!