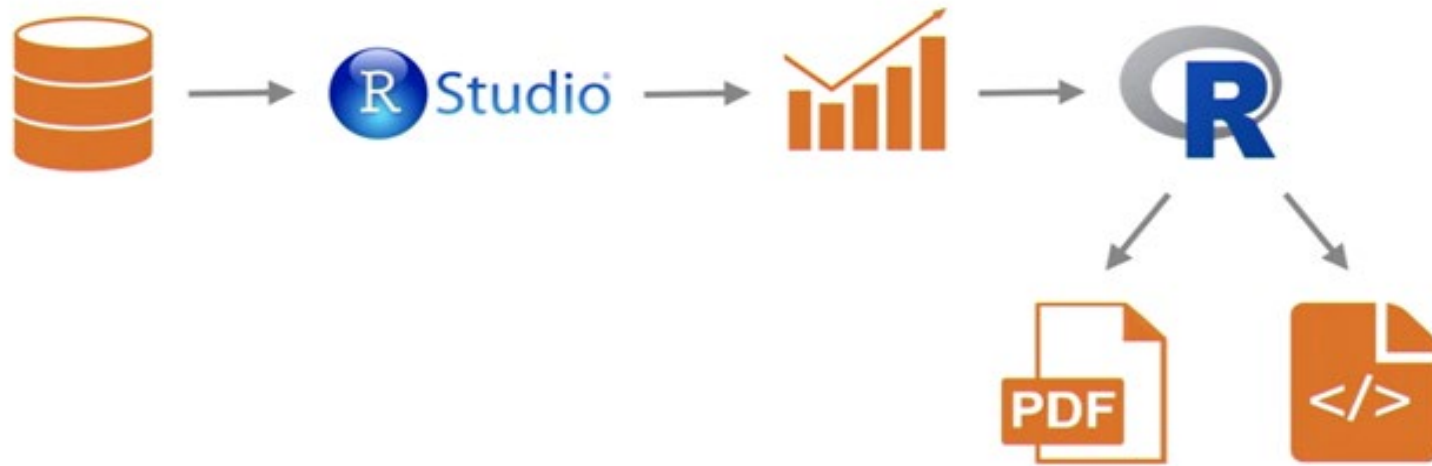# Interactive presentations with Shiny & R
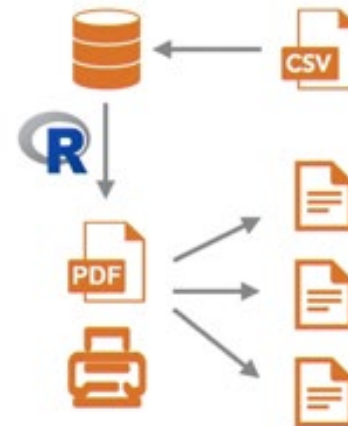
Linkedin Learning

RMarkdown Workflow

- Open platform for publishing R Markdown documents and presentations

- Allows for HTML files to be shared freely with others, and includes a commenting feature
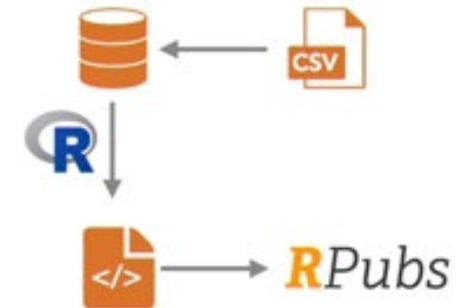
Follow these steps to publish an RMarkdown presentation from RStudio to RPubs

- Register for a RPubs account
- Connect your RStudio installation to RPubs from the Global Options
- Knit together your RMarkdown presentation
- Select "publish" in the top-right corner

PDF Presentations

HTML Presentations

Summary of shinyApp Functions

- *render** functions are used to generate output objects in the server—and are dependent on *input$vars*.

- **Output* functions are used to display output objects in the client—and must be given strings.

Especially useful bootstrap themes:

- Flatly   e.g., theme = shinytheme("Flatly")

- Spacelab

- selectInput produces strings—which may need to be converted into other data types

- Use *print(input$vars)* inside *render** functions to debug and troubleshoot

shiny.rstudio.com/gallery/widget-gallery.html

Shiny by RStudio   BACK TO GALLERY   GET CODE   SHARE

Shiny Widgets Gallery

For each widget below, the Current Value(s) window displays the value that the widget provides to shinyServer.
Notice that the values change as you interact with the widgets.

Action button

Action

Current Value:

```
[1] 0
attr(,"class")
[1] "integer"          "shinyActionButt
onValue"
```

Single checkbox

☑ Choice A

Current Value:

```
[1]  TRUE
```

See Code

Checkbox group

☐ Choice 1
☑ Choice 2
☐ Choice 3

Current Values:

```
[1]  "2"
```

See Code

http://shiny.rstudio.com/gallery/widget-gallery.html

Web Application (www.shinyapps.io, www.htmlwidgets.org)

You'll need these functions for your shiny app:
- shinyApp
- sliderInput
- plotOutput
- renderPlot

- shinyapps.io is a hosting platform for Shiny apps.

- While displayed onscreen, Shiny apps consume active hours.

- shinyapps.io has a default timeout period of 15 mins.

Summary

- Register for an account at shinyapps.io

- Get 25 active hours with a free shinyapps.io account

- Connect RStudio to your shinyapps.io account through the Publishing section of the Global Options screen

- Dashboards built with Shiny are beautifully responsive—thanks to the Bootstrap framework.

- Rich, interactive charts and maps can easily be included using htmlwidgets.

ui.R and server.R files; libraries providing interactions should be included in both the components, htmlwidgets can easily be integrated into shiny apps

Self-Contained shinyApp

```
1  library(shiny)
2  shinyApp(
3    ui =  ,
4    server = function(input,output){
5
6    }
7  )
```

Split-File Shiny Apps

```
ShinyApp
|  - - ui.R
|  - - server.R
|      |  - - data
|      |      |  - - datafile1.csv
|      |      |  - - datafile2.csv
|      |  - - images
|      |      |  - - image1.png
|      |      |  - - image2.png
```

Watching: **Using htmlwidgets in Shiny apps**
From the course: **Creating Interactive Presentations with Shiny and R**

Required Install Packages

- install.packages("WDI")
- install.packages("highcharter")
- install.packages("forecast")
- install.packages("lubridate")