

Web Apps in R

Shiny Package

- Shiny is an R package that allows you to build **interactive Web Apps**
- There are several **extension** packages to Shiny
 - Shinythemes, shinydashboard, shinyjs, etc.
- Web apps can be deployed on your **own server** (eg. Digital Ocean) or to **Shinyapps.io**
- There are lots of example codes to get you started at the **Shiny Gallery** (<https://shiny.rstudio.com/>)

Goals to learn:

1. Structure of a Shiny web app
2. Examples of Shiny web app
3. How to build a simple interactive web app

Structure of a Shiny Web App

1. **3 components:**
 - a. User interface (**ui.R**)
 - b. Server function (**server.R**)
 - c. shinyApp function (fuses the UI and server components)
2. The **UI** is the frontend that accepts user input values
3. The **Server** is the backend that process these input values to finally produce output results that are finally displayed on the website

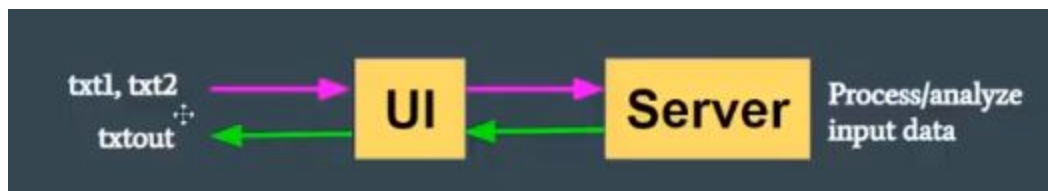


Shiny Themes

- Code:

```
ui <- fluidPage(theme = shinytheme("superhero"),
```
- To check the themes available: <https://rstudio.github.io/shinythemes/>

How does the UI and the Server interact?



How the App Looks:

The screenshot shows a web browser window displaying a Shiny application. The browser's address bar shows the URL `http://127.0.0.1:3503` and includes buttons for "Open in Browser" and "Publish". The application's title bar reads "Intro to Shiny Web App / My first App Tutorial". The interface features a dark blue background with a light blue sidebar on the left. The sidebar contains the heading "Input:" followed by two text input fields: "Given Name:" with the value "Verna Marie" and "Surname:" with the value "Maullon". The main content area on the right has the heading "Header 1" and a section titled "Output 1" which displays the concatenated string "Verna Marie Maullon".

~ /001FirstApp/firstapp - Shiny

http://127.0.0.1:3503 Open in Browser Publish

Intro to Shiny Web App / My first App Tutorial Navbar 1 Navbar 2 Navbar 3

Input:

Given Name:

Verna Marie

Surname:

Maullon

Header 1

Output 1

Verna Marie Maullon