Adding Shiny to Presentations

Shiny and shinyapps.io

Shiny is an R package that allows interactive HTML elements to be generated (and *rendered*) from interpreted R code.

To display Shiny content in a webpage the R code must be interpreted by a Shiny-enabled server - shinyapps.io provides this as a service.

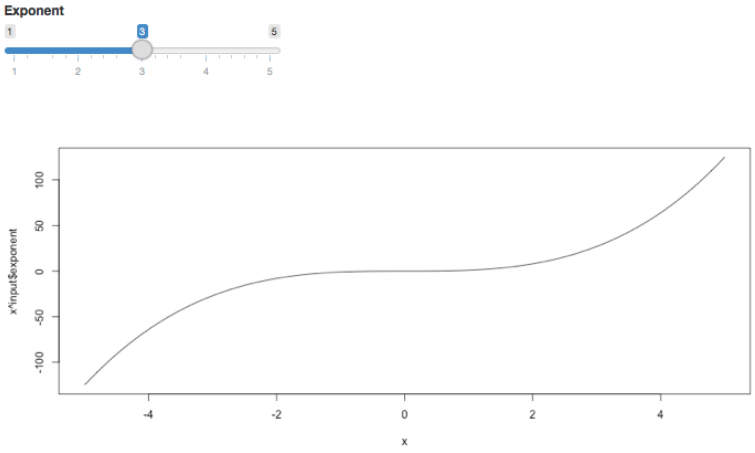
However it is very simply to interact with Shiny apps on your local machine without relying on such services. In the exercises you'll create your own shinyapps.io account and upload a Shiny app to the web, but for the next few slides we'll consider only what you need to do to build an interactive Shiny app on your local machine.

First Shiny App

To use shiny it's necessary to install the shiny library as follows, and make sure that it is "loaded" using the `library` function

```
install.packages("shiny")
library(shiny)
```

The following interactive app will now be built by your lecturer and the mechanics of it explained.



Why UI and Server?

Shiny apps are split into two sections - the UI and server side code.

It's important to understand what Shiny does - it provides a way to write a HTML GUI (i.e. HTML and JavaScript) in R code and provides a framework for a browser displaying a Shiny app to exchange information with a Shiny server.

The app is therefore split into client-side and server-side code - or shinyUI and shinyServer. Fundamentally, the UI is only aware of "values" (or data) from the server assigned to the output object.

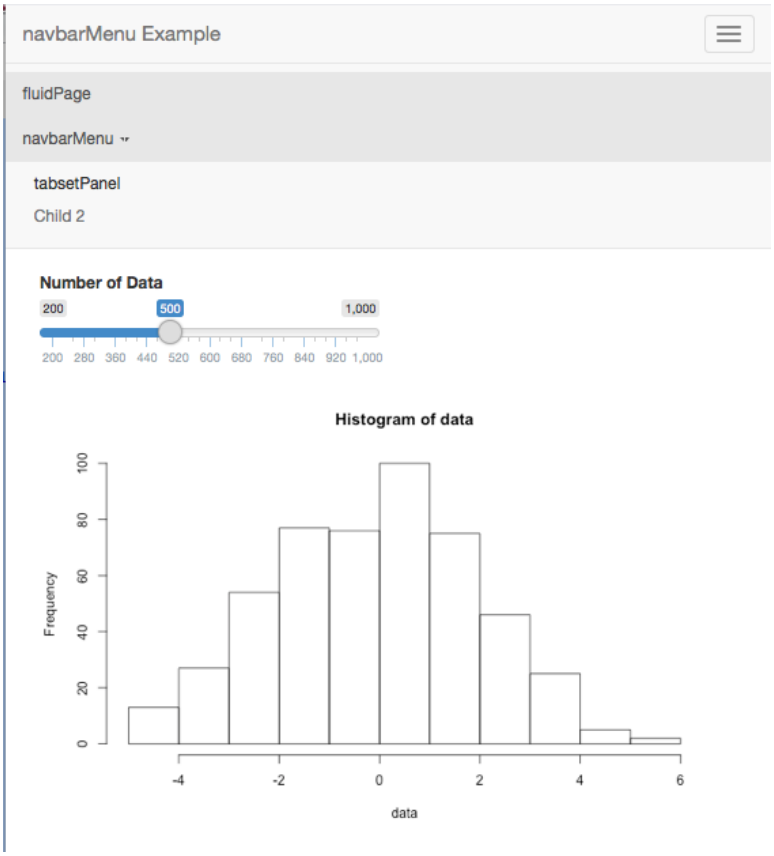
Exercises (15mins)

Bootstrap and Shiny apps

Bootstrap is an incredibly powerful and flexible framework for making "responsive web elements" - content that resizes (or transforms) dependent on the window size of your browser.

The following interface is built entirely within Shiny using the following layout tools:

- navbarPage
- navbarMenu
- tabsetPanel



Exercises (10mins)