Development of web applications with R Shiny and Docker

Software engineer applied to data solutions

inloco

$whoami

Gabriel Teotonio

- Undergrad of Statistics - UFPE
- Data Scientist - In Loco

linkedin.com/in/gabrielteotonio

github.com/gabrielteotonio

gabriel.teotonio@inloco.com.br

Overview

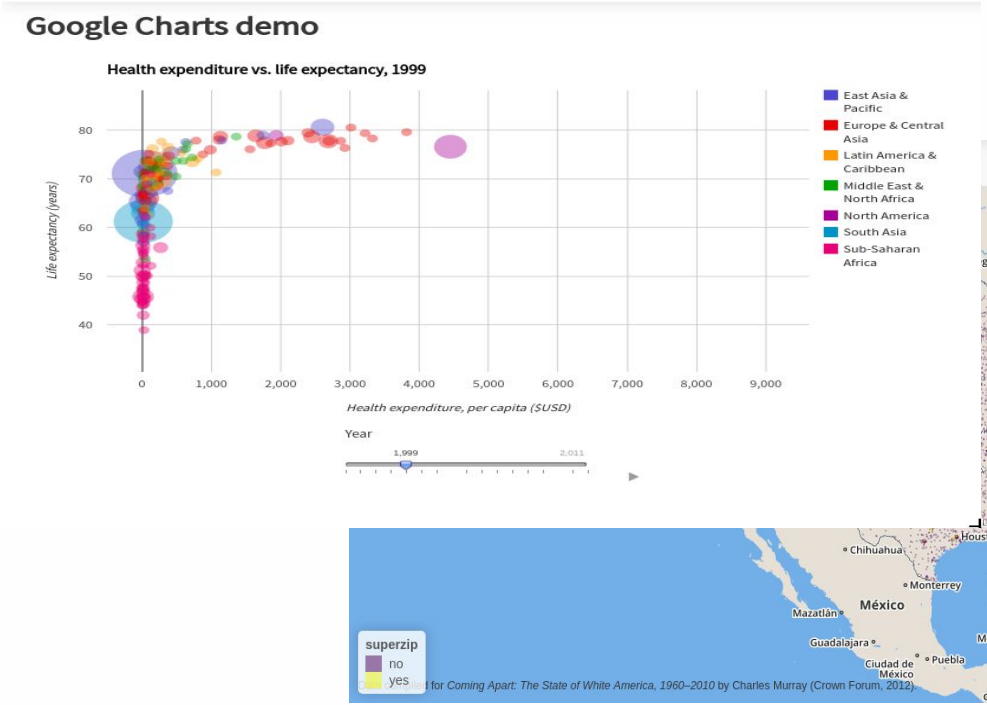
- Applications using Shiny
- Docker
- Hands-on

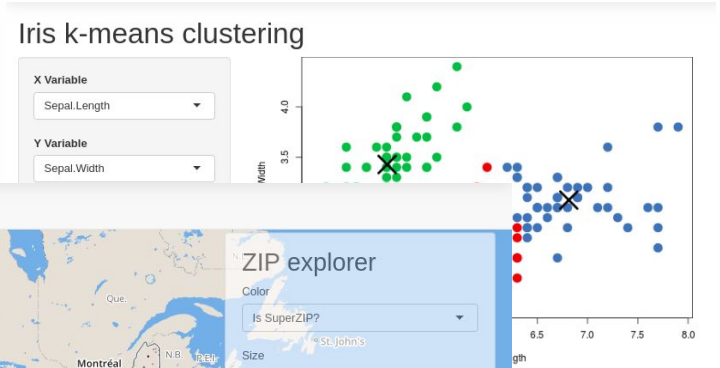
Web Applications using Shiny

What is Shiny?

Shiny is an R package that makes it easy to build interactive web apps straight from R. You can host standalone apps on a webpage or embed them in R Markdown documents or build dashboards. You can also extend your Shiny apps with CSS themes, htmlwidgets, and JavaScript actions.

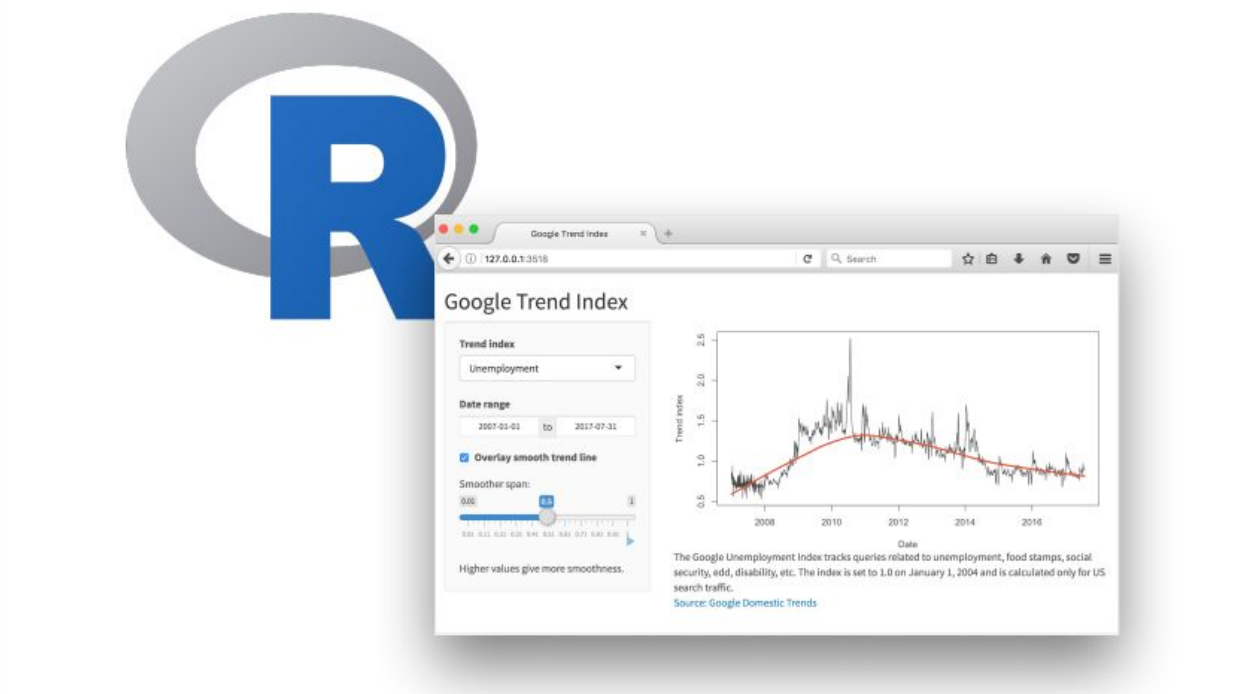
Some examples



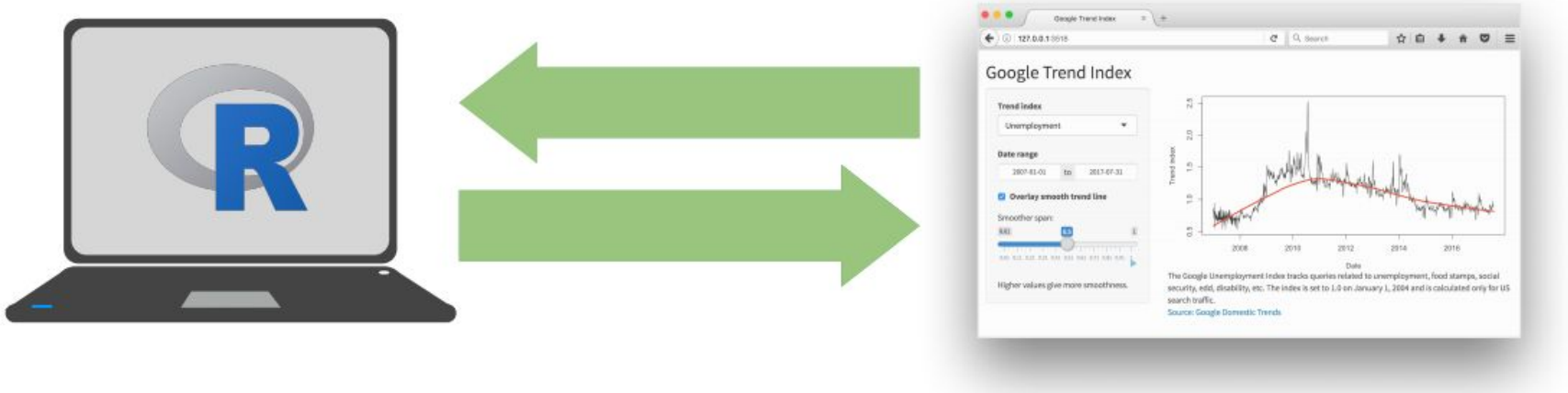


For more, see [Shiny gallery](#).

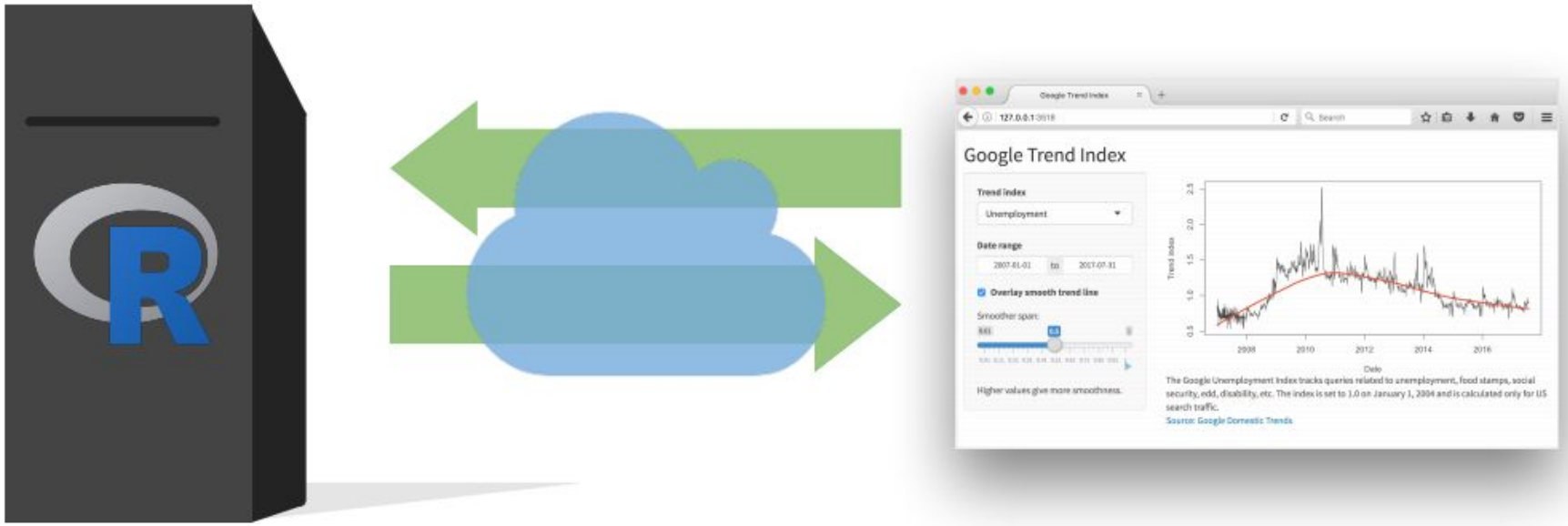
Every Shiny app has a webpage that the user visits, and behind this webpage there is a computer that serves this webpage by running R.

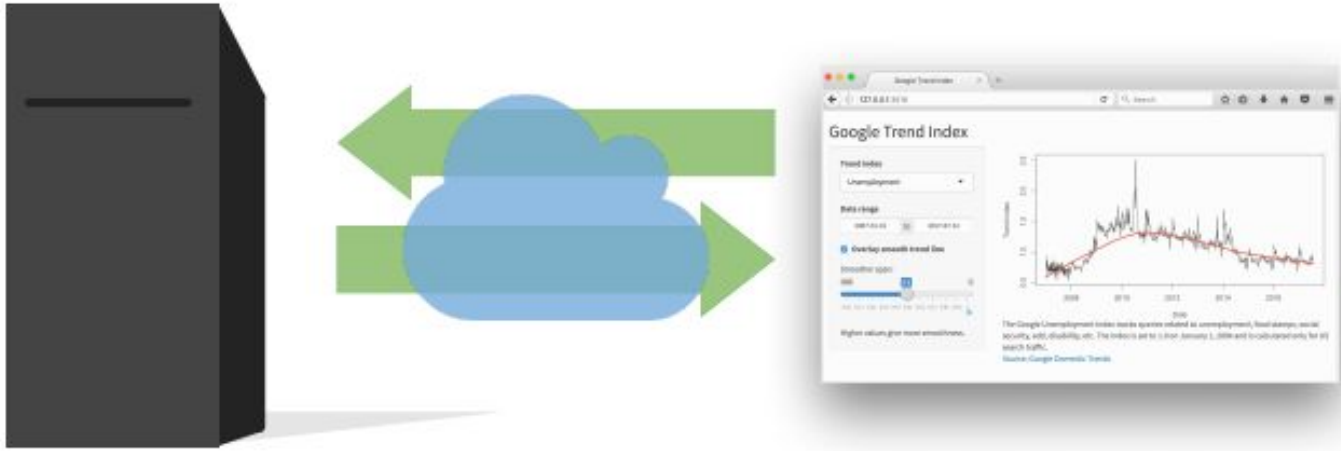


When running your app locally, the computer serving your app is your computer.



When your app is deployed, the computer serving your app is a web server.





Server instructions

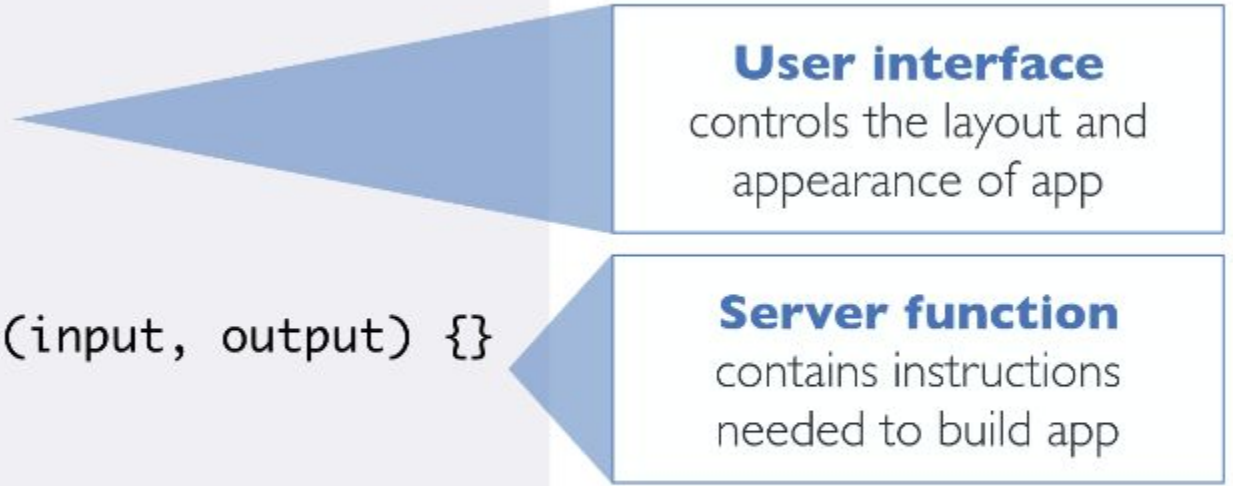
User interface

Anatomy of a Shiny app

```
library(shiny)
ui <- fluidPage()

server <- function(input, output) {}

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



Shiny cheat sheet

Image Compression - PCA

Number of PC to be used in the compression:

2 64

1 8 15 22 29 36 43 50 57 64

Code

Docker

Code

Hands-on