

# R Products



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# What can you make in R?

- .R scripts
- [R Markdown](#): reports/documents/[notebooks](#) (html/pdf/.doc)
- [R packages](#)
- [Shiny apps](#)
- [blogdown](#): blogs & websites
- [bookdown](#): books

# Today we will focus on...

- .R scripts
- R Markdown: reports/documents/notebooks (html/pdf/.doc)
- **R packages**
- **Shiny apps**
- blogdown: blogs & websites
- bookdown: books

# R Packages

# R Packages: Why Make Them?

“It is about saving yourself time.” - [Hilary Parker](#)

“Anything that can be automated, should be automated. Do as little as possible by hand. Do as much possible with functions.” - [Hadley Wickham](#)

## my\_functions.R

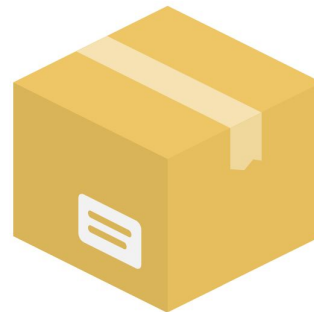
```
hello <- function(name){  
    return(paste0("hello ",name))  
}  
  
goodbye <- function(name){  
    return(paste0("bye ",name))  
}
```

## my\_functions.R

```
hello <- function(name){  
  return(paste0("hello ",name))  
}  
  
goodbye <- function(name){  
  return(paste0("bye ",name))  
}
```



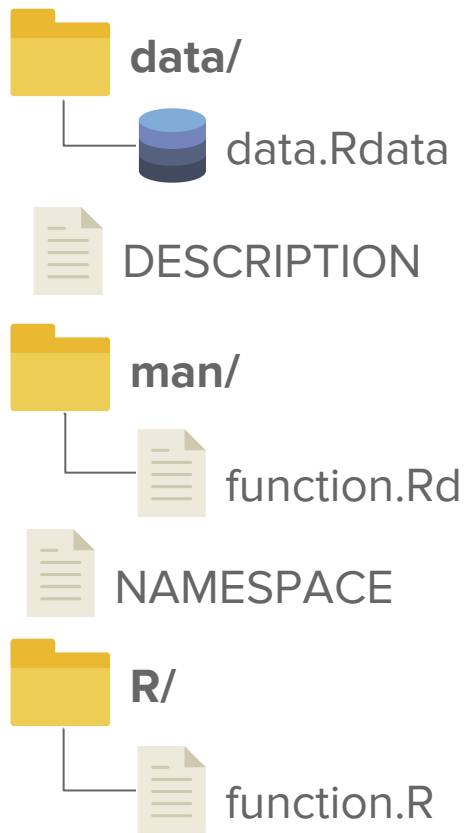
## gReetings



```
gReetings::hello()
```

```
gReetings::goodbye()
```

# R Packages: Structure





# You can host R packages on...

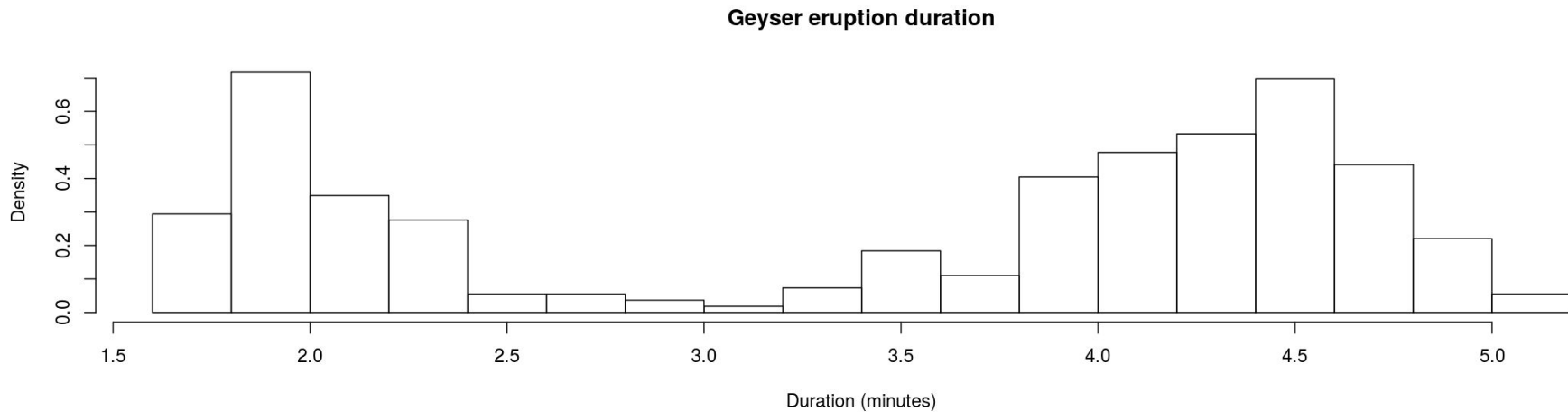
- CRAN
- Bioconductor/Neuroconductor
- R-Forge
- GitHub

# You can host R packages *\*most easily\** on...

- CRAN
- Bioconductor/Neuroconductor
- R-Forge
- GitHub

 **Shiny Apps** 

# Shiny Apps: What Are They?



# Shiny Apps: What Are They?

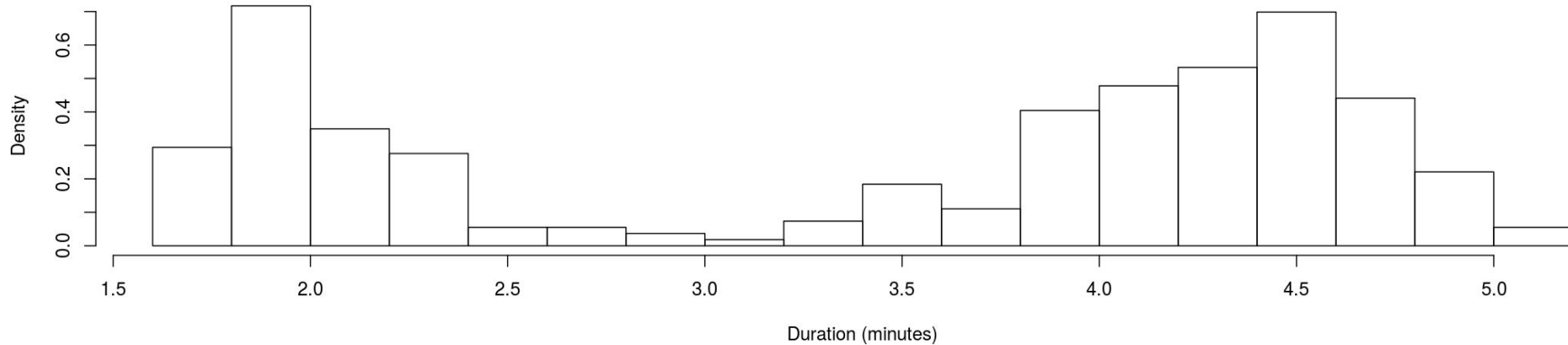
Number of bins in histogram (approximate):

20

☐ Show individual observations

☐ Show density estimate

Geyser eruption duration



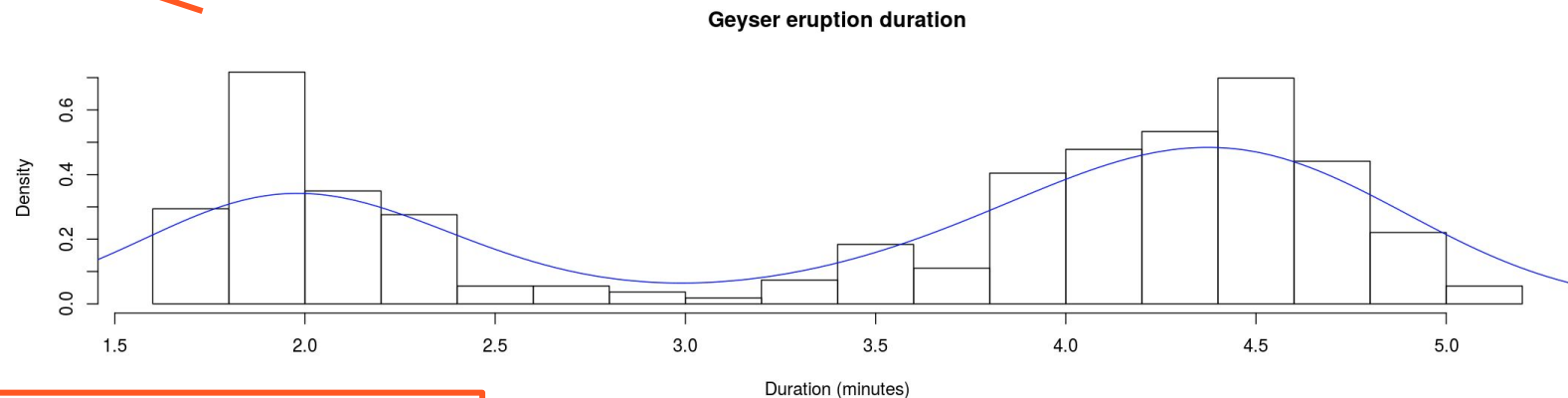
# Shiny Apps: What Are They?

Number of bins in histogram (approximate):

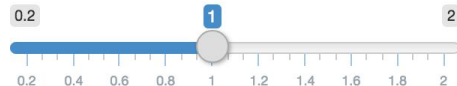
20

☐ Show individual observations

☒ Show density estimate



Bandwidth adjustment:



# Shiny Apps: What Are They?

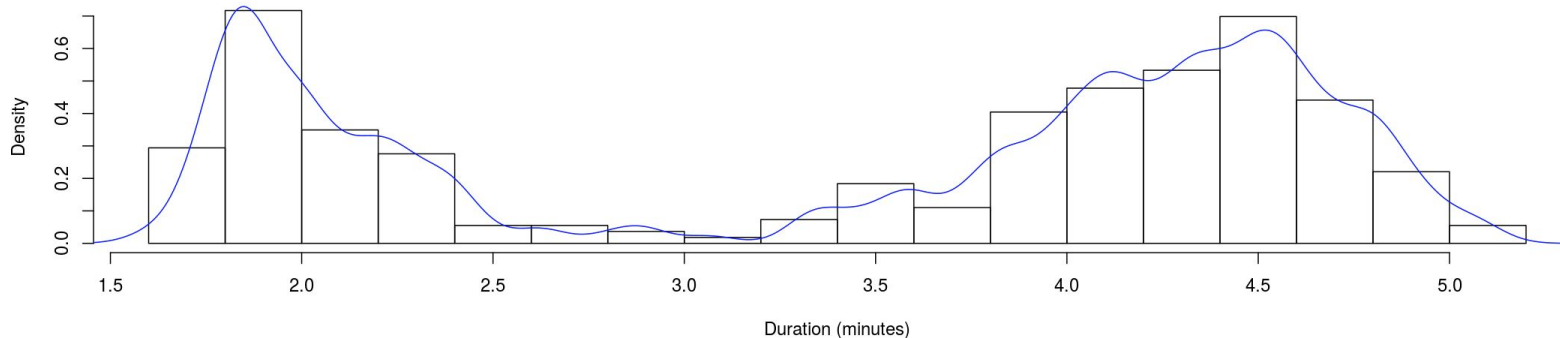
Number of bins in histogram (approximate):

20

☐ Show individual observations

☒ Show density estimate

Geyser eruption duration



Bandwidth adjustment:



## ui.R

```
.....
sidebarPanel(
  checkboxInput(
    "check",
    "Select this",
    FALSE)
  ),
mainPanel(
  textOutput("response")
)
.....
```

## server.R

```
.....

output$response = renderText({
  if(input$check == TRUE){ "Yes" }
  if(input$check == FALSE){ "No" }
})

.....
```



## ui.R

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sidebarPanel(  
  checkboxInput(  
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    "Select this",  
    FALSE)  
  ),  
  
mainPanel(  
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}  
  
.....
```



**Let's learn  
by doing!**

(Start R Products Tutorial)