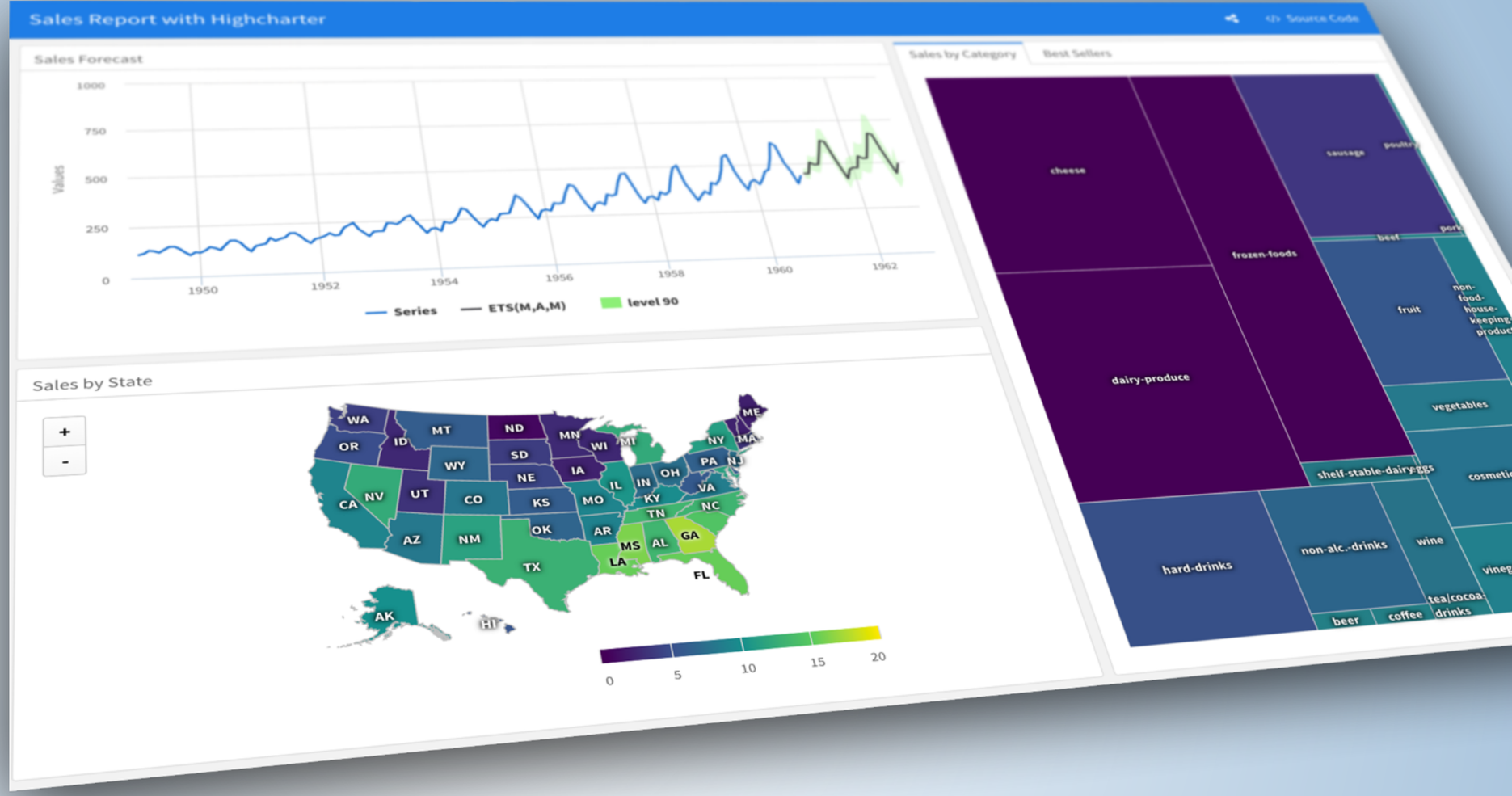


Introducing flexdashboard

AN R MARKDOWN FORMAT FOR QUICK, INTELLIGENT DASHBOARDS

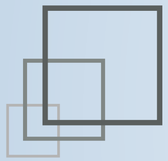
RStudio

What is a flexdashboard?

http://rmarkdown.rstudio.com/flexdashboard/examples.html

flexdashboards

1. **Dashboards based on R Markdown**
   Easy to compose, easy to publish



2. **Intelligent re-sizing**
   Will re-size components to fill the browser and display on mobile devices.

3. **Support a wide variety of components**
   htmlwidgets; base, lattice, and grid graphics; tabular data; gauges and value boxes; and text.

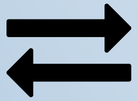
4. **Shiny compatible**

Outline

1. **Get Started**
   How to install, open, and render a basic dashboard.

2. **Layouts**
   Quick tour of columns, rows, pages, tabsets and storyboards

3. **Components**
   Value boxes, gauges, and Shiny components



4. **flexdashboard vs. shinydashboard**
   When should you use one or the other?

GET STARTED

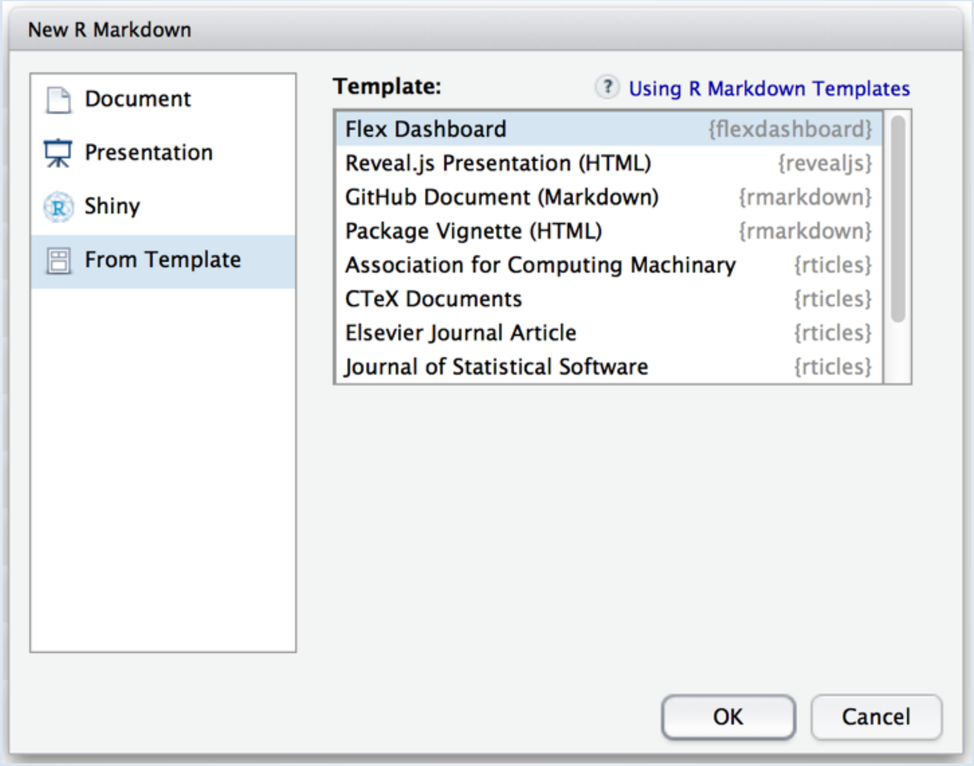
Install

Install the flexdashboard package from CRAN as follows:

```
install.packages("flexdashboard", type = "source")
```

Open new

File > New File > R Markdown… > From Template > Flex Dashboard



If you are not using RStudio, you can create a new flexdashboard R Markdown file from the R console:

```
rmarkdown::draft("dashboard.Rmd", template = "flex_dashboard", package = "flexdashboard")
```

flexdashboard format

A flexdashboard is an .Rmd file with
`output: flexdashboard::flex_dashboard`

```
---
title: "Untitled"
output: flexdashboard::flex_dashboard
---


# Body
```

Demos

https://github.com/rstudio/webinars/tree/master/22-flexdashboard

LAYOUTS

Layout Elements

Header level	Alternative syntax	Layout element
#	=======	Page
##	----------	Column (or Row if `orientation: row`)
###		Box

Modify elements with { } syntax, e.g.

```
## Column  {.tabset .tabset-fade}
```

{.mobile}	Indicates which of two identically named components will appear on a mobile device
{.no-mobile}	Component will not appear when displayed on a mobile device
{.no-padding}	Include no padding around charts (8 pixels included by default)
{.no-title}	Exclude the title of a component
{.sidebar}	Display component as a sidebar
{.storyboard}	Lays out page as a storyboard (also see `storyboard: true`)
{.tabset}	Display sub-components in a tabset
{.tabset-fade}	Adds fade in/out effect when switching tabs in a tabset
{data-padding=10}	Sets padding around charts (here to 10 pixels)
{data-height=650}	Sets relative height of a component
{data-width=350}	Sets relative width of a component
{data-icon="fa-list"}	Adds font awesome, Ionicons, or Bootstrap Glyphicons icon as page name in navbar
{data-orientation=rows}	Sets orientation for a page
{data-navmenu="Menu A"}	Indicates that a page should be accessed via a navbar menu (here named "Menu A")
{data-commentary-width=400}	Sets relative width of storyboard commentary component

Output Options

Set output options for flex_dashboard as you would for other R Markdown formats,

New Line

Indent two spaces

Indent four spaces

```
---
title: "Untitled"
output:
  flexdashboard::flex_dashboard:
    orientation: rows
    vertical_layout: scroll
---


# Body
```

Colon

YAML Output Options

Option	Value(s)	Defines
css:	file path to .css	CSS to apply to dashboard
favicon:	file path to image	
logo:	file path to image	Logo to place in top left of navbar
navbar:	- {title: "A", href: "URL", align: left}	Links to manually add to navbar
orientation:	rows or columns	Orientation of columns within dashboard
social:	[“facebook”, “twitter”, “google-plus”, “linkedin”, “pinterest”, and.or "menu"]	Links to social media to include in navbar
source_code:	embed or URL	Embeds or links to the source code
storyboard:	true or false	Display components as a storyboard
theme:	name of bootswatch theme	Bootswatch CSS theme to apply to dashboard
vertical_layout:	fill or scroll	Size elements to fit in window or not

Storyboard Syntax

Each box in a storyboard becomes a frame with four parts:

One or two sentence summary of the frame

Frame content

Optional line break

Optional commentary to appear alongside frame in sidebar to right

````
### Frame caption for navigation

```{r}
library(d3heatmap)
d3heatmap(mtcars, scale="column",
          colors="Blues")
```

***

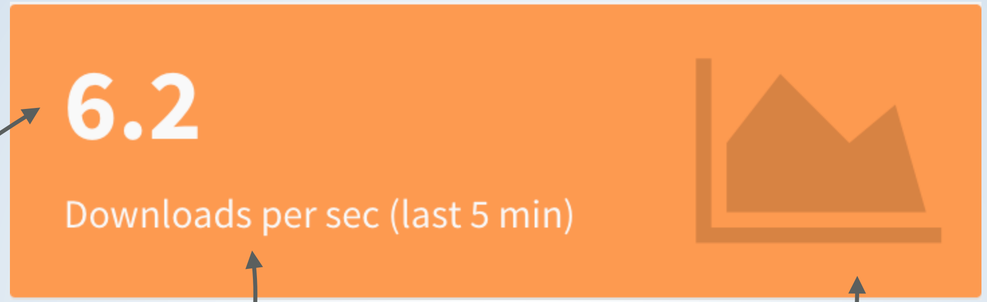
Some comment about this frame
````

storyboard: true

https://beta.rstudioconnect.com/jjallaire/htmlwidgets-showcase-storyboard/

COMPONENTS

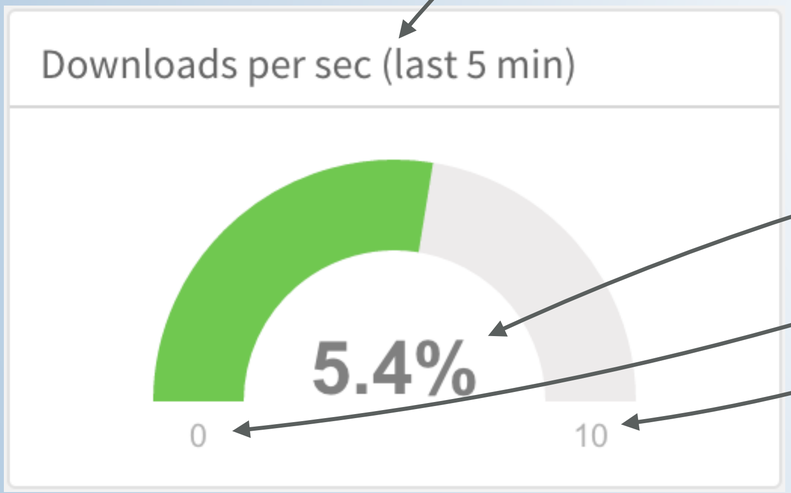
valueBox()




````
### Downloads per sec (last 5 min)

```{r}
valueBox(
    value = rate,
    icon = "fa-area-chart",
    color = if (rate >= 3) "warning" else "primary"
  )
```
````

gauge()




```
### Downloads per sec (last 5 min)

```{r}
gauge(
  value = rate,
  min = 0,
  max = 10,
  sectors = gaugeSectors(
    success = c(0, 6),
    warning = c(6, 8),
    danger = c(8, 10)
  )
)
```
```

Shiny components

To add Shiny components to a flexdashboard, include `runtime: shiny` in the YAML

runtime: shiny

```
---
title: "Untitled"
output: flexdashboard::flex_dashboard
runtime: shiny
---
```

Render interactive valueBoxes and gauges with

```
renderValueBox()
renderGauge()
```

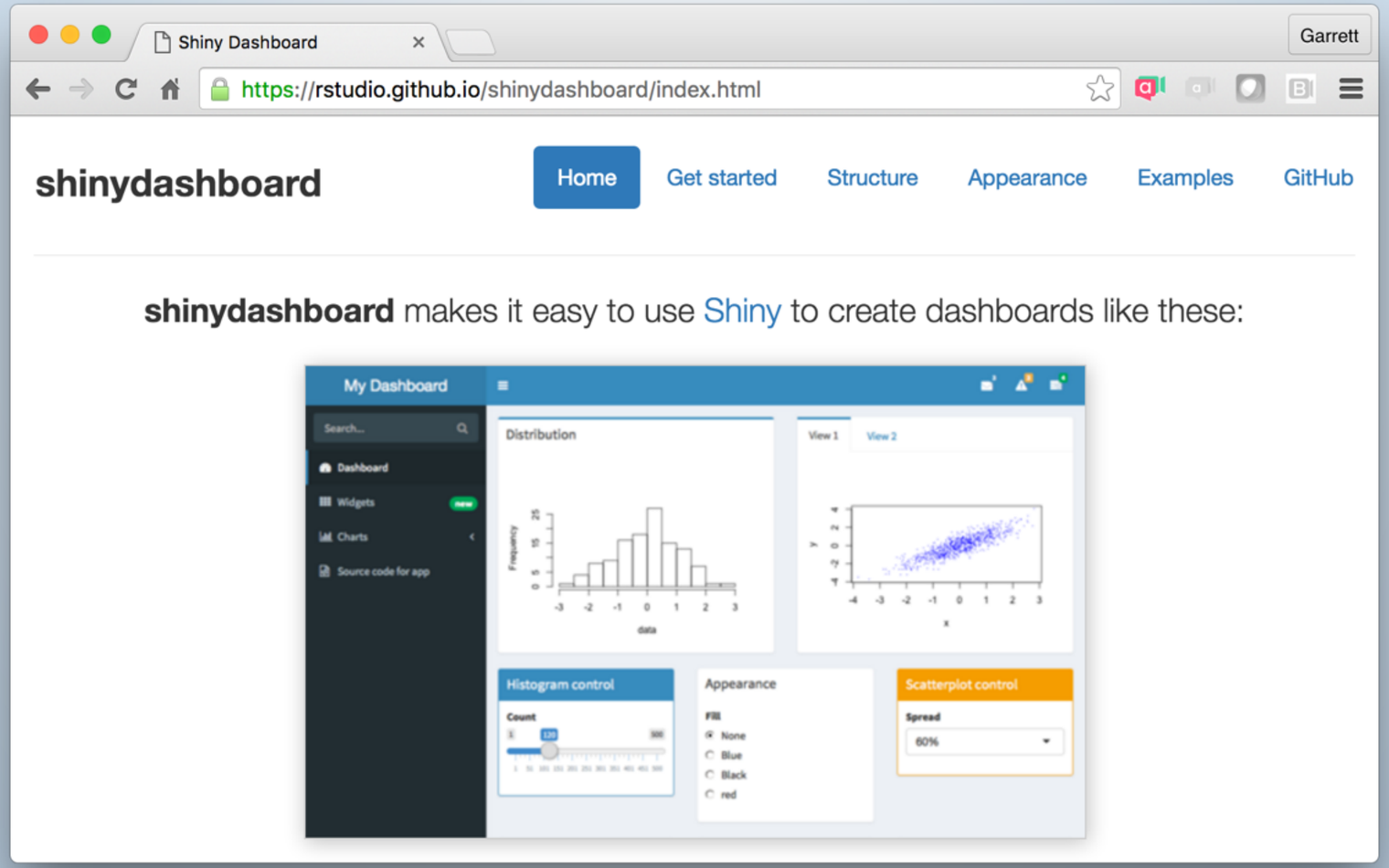
https://gallery.shinyapps.io/cran-gauge/

FLEXDASHBOARD
VS.
SHINYDASHBOARD

Shinydashboard

A dashboard package that works with Shiny's UI framework.

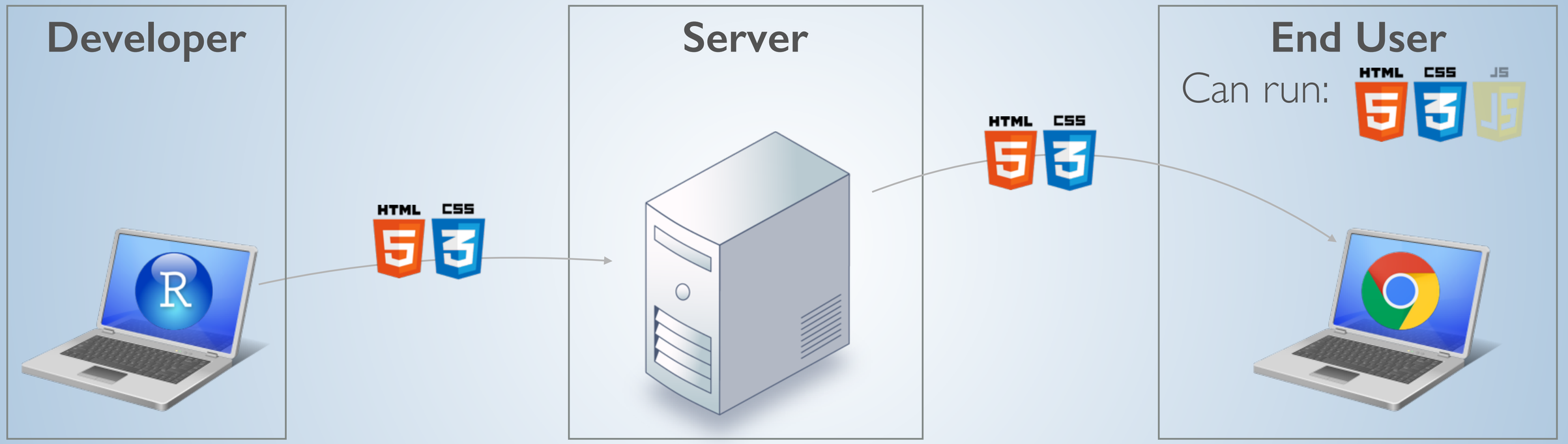
* Directly integrated into Shiny (a Shiny dashboard is always a Shiny app)
* More tools than flexdashboard, but more to learn



https://gallery.shinyapps.io/087-crandash/

(Static) flexdashboard

A flexdashboard is a html DOM created with R Markdown



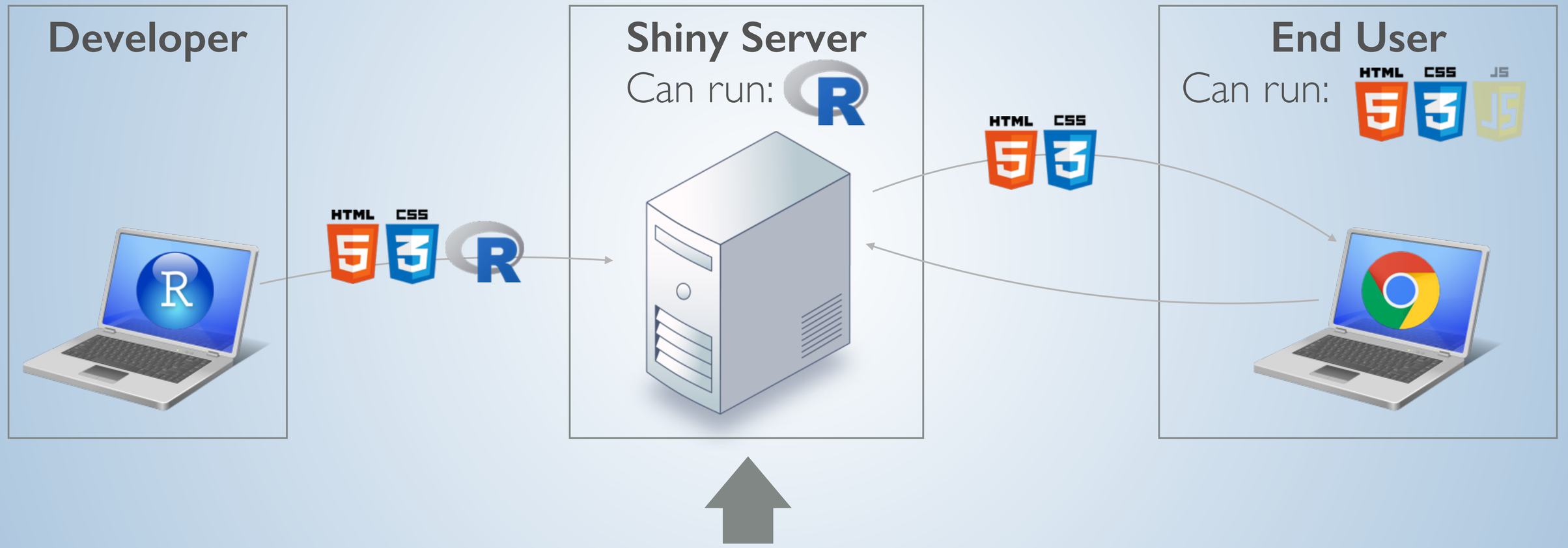
flexdashboard + htmlwidget

An htmlwidget is a self-contained JavaScript program

Processing happens in JavaScript
in user's web browser.
User needs the data.

flexdashboard + Shiny

A Shiny app is an html DOM and a set of instructions to run in R



Processing happens in R on the server.
Server needs Shiny Server (Pro).
User does not need the data.

flexdashboard vs. shinydashboard

	Design experience	Data	Interactions	Server requirements
Case 1 flexdashboard with htmlwidgets	Quick with constraints	Small and Public (easily shared)	Anything htmlwidgets can do	none
Case 2 flexdashboard with Shiny	Quick with constraints	Any size or Private	Anything R can do	Shiny Server or shinyapps.io
Case 3 shinydashboard	No constraints	Any size or Private	Anything R can do	Shiny Server or shinyapps.io

Thank You

rmarkdown.rstudio.com/flexdashboard/