





Dashboards

Mine Çetinkaya-Rundel

@minebocek 
mine-cetinkaya-rundel 
mine@stat.duke.edu 

What is in a dashboard?



Dashboards

- Automatically updating
 - Not just based on user gestures
 - But also when data source changes
- Many viewers looking at the same data
- May or may not be interactive



Motivation

- You have new data coming in — constantly, continuously, or on a schedule
- When new data comes in, it's automatically received, and transformed, aggregated, summarized, etc.
- May want to call attention to exceptional results



UI

- Static:
 - R code runs once and generates an HTML page
 - Generation of this HTML can be scheduled
- Dynamic:
 - Client web browser connects to an R session running on server
 - User input causes server to do things and send information back to client
 - Interactivity can be on client and server
 - Can update data in real time
- User potentially can do anything that R can do



flexdashboard vs. shinydashboard

flexdashboard	shinydashboard
R Markdown	Shiny UI code
Super easy	Not quite as easy
Static or dynamic	Dynamic
CSS flexbox layout	Bootstrap grid layout



flexdashboard



Your turn

- `library(flexdashboard)`
- File → New file → R Markdown → From Template
- Create three plots that go in each of the panes using built-in R datasets or any data we have used in the workshop (or your own data)



5_m 00_s



Your turn

- Open `apps/dashboards/flexdashboard_01.Rmd`
- How is it different than Shiny apps we have been building so far, how is it similar?
- Make a change to the layout of the dashboard, see <http://rmarkdown.rstudio.com/flexdashboard/using.html#layout> for help
- Change the theme of the dashboard, see <http://rmarkdown.rstudio.com/flexdashboard/using.html#appearance> for help



5_m 00_s



Shiny documents

- Add runtime: shiny to header.
- Add inputs in code chunks.
- Add renderXyz functions in code chunks.
 - No need for output\$x <- assignment, or for xyzOutput functions.



Your turn

- Continue working on `apps/dashboards/flexdashboard_01.Rmd`
- Add another UI widget, a `radioButton`, that allows the user to select whether the plot used to visualize the distribution of weight should be histogram or a violin plot

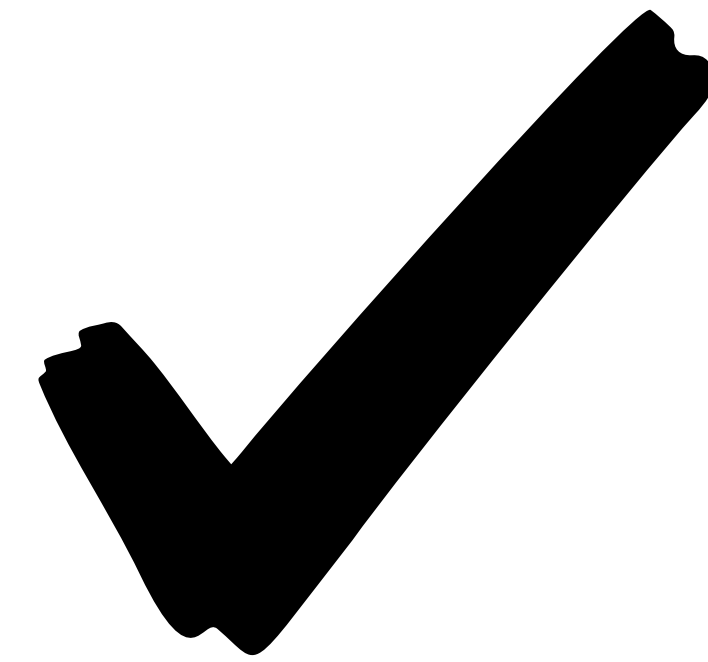


3_m 00_s



Solution to the previous exercise

apps/dashboards/flexdashboard_02.Rmd









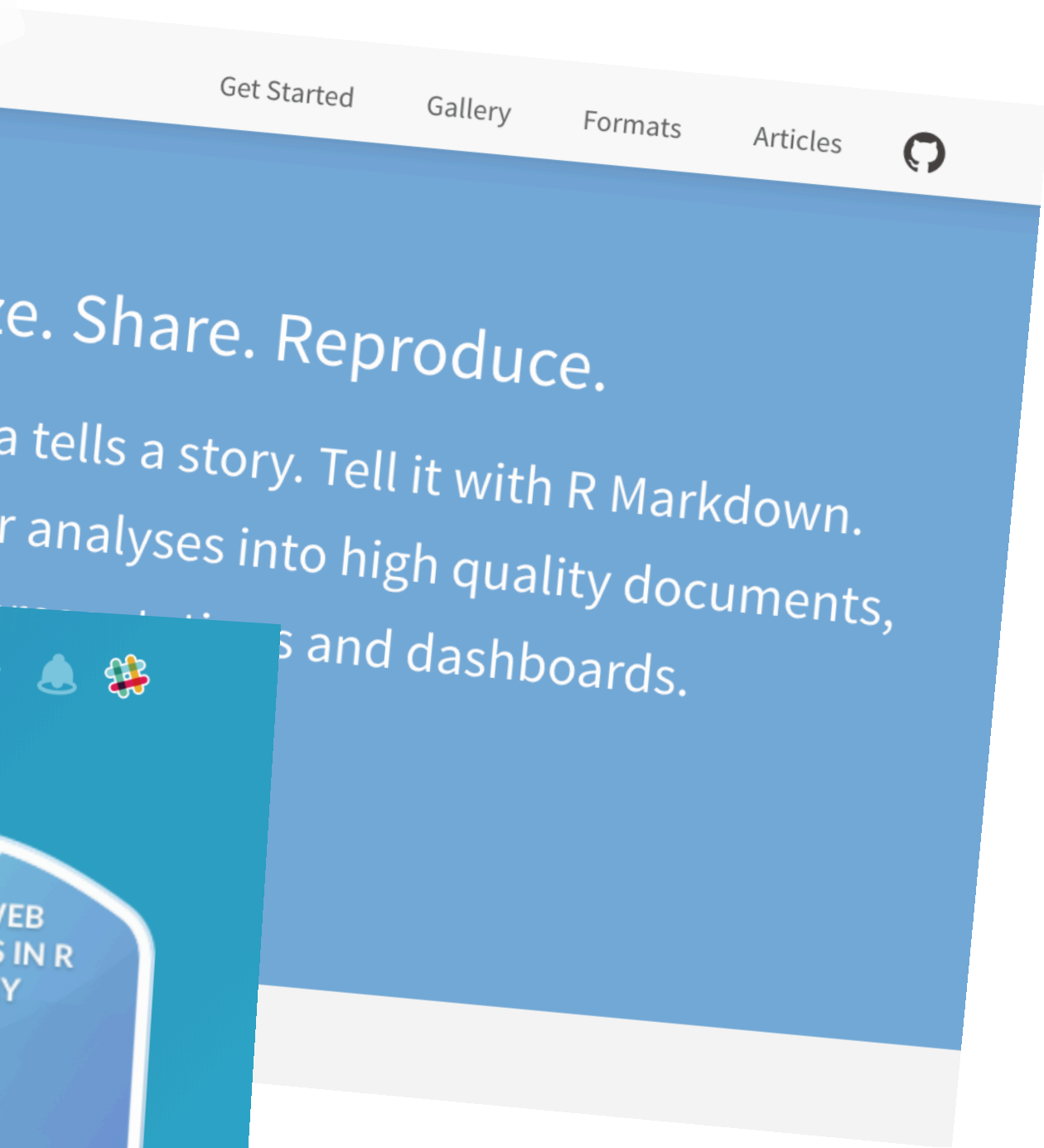
SOLUTION







Where to go next?




	rstudio::conf 2018 This category is for anything and everything related to rstudio::conf.	7 / week 4 unread 2 new
	tidyverse This category is for anything and everything about the tidyverse.	15 / week 6 new
	RStudio IDE This category is for discussing the RStudio IDE, both desktop and server versions.	21 / week 1 unread 7 new
	Teaching For discussions about teaching.	3 / week 4 unread 1 new
	shiny Please ask your questions about shiny here.	27 / week 3 unread 12 new
	R Markdown Please ask your questions about R Markdown here.	8 / week 1 unread 2 new




DataCamp


Learn ▾ | Groups | About ▾ | 850 XP  ▾ |  | 






Building Web Applications in R with Shiny

Continue Course



Mine Cetinkaya-Rundel
Associate Professor at Duke University

BUILDING WEB APPLICATIONS IN R WITH SHINY

 4 hours |  17 Videos |  55 Exercises |  1,313 Participants |  4,350 XP

