

WELCOME

Before we start, make sure you have **this repo** cloned to your laptop: https://github.com/OlgaShldrr/flexdashboard_workshop

and the following **packages** installed:

```
install.packages(c('readr', 'tidyverse', 'plotly', 'flexdashboard',  
'rmarkdown', 'DT'))
```

Flexdashboard with R

February 28, 2023

ABOUT ME



Ex-Deloitte,
background in
non-profit sector



Living in Utrecht



Founder of Good
Analytics
(www.goodanalytics.nl)



I paint and
learn to surf

Let's connect on socials!

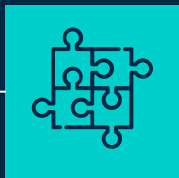


Olga Sholderer



sholderer

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BASICS

What is
flexdashboard and
RMarkdown



02

ADD-ONS

Fill your dashboard
with interactive
widgets



03

CREATE A DATA STORY

Streamline your
dashboard

01 BASICS

The background is a dark blue field decorated with a pattern of small squares and thin vertical lines. The squares are in three colors: light blue, pink, and orange. Some squares are solid, while others are hollow outlines. The vertical lines are thin and white, extending from the top or bottom of the frame.

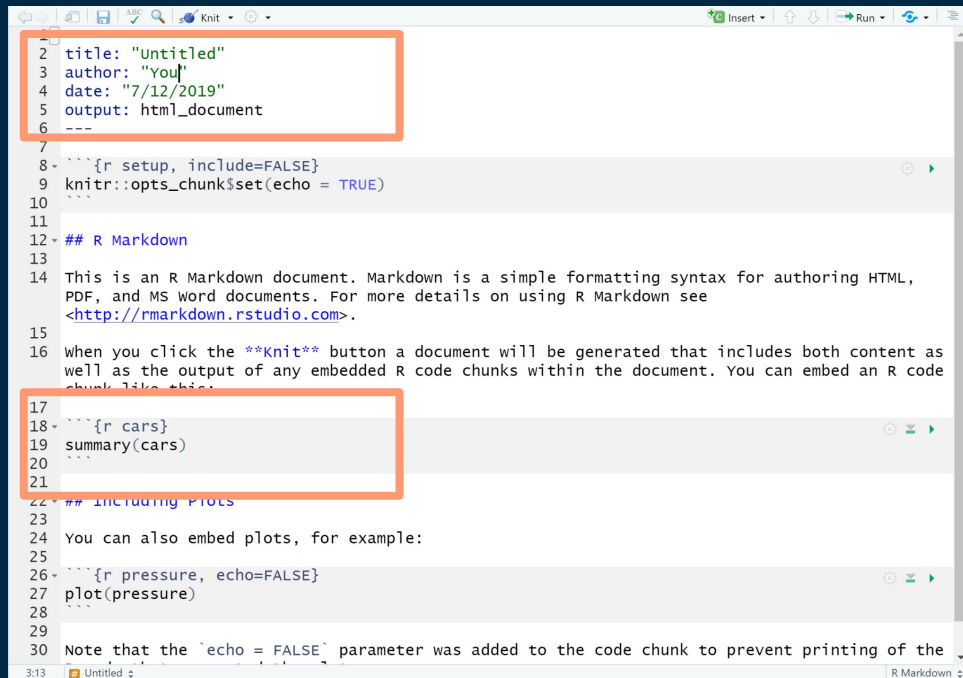
WHAT IS RMARKDOWN

Format that enables easy creation of dynamic documents, presentations, and reports from R

Outputs HTML-files, PDF documents, presentations, ... and yes, **dashboards**!



WHAT IS RMARKDOWN: EXAMPLE



```
2 title: "Untitled"
3 author: "You"
4 date: "7/12/2019"
5 output: html_document
6 ---
7
8 {r setup, include=FALSE}
9 knitr::opts_chunk$set(echo = TRUE)
10
11
12 ## R Markdown
13
14 This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML,
15 PDF, and MS Word documents. For more details on using R Markdown see
16 <http://rmarkdown.rstudio.com>.
17
18 When you click the Knit button a document will be generated that includes both content as
19 well as the output of any embedded R code chunks within the document. You can embed an R code
20 chunk like this:
21
22 {r cars}
23 summary(cars)
24
25
26 ## Including Plots
27
28 You can also embed plots, for example:
29
30 {r pressure, echo=FALSE}
31 plot(pressure)
32
33 Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the
```

←Header

←Code chunk

FLEXDASHBOARD

R package that allows to easily create a dashboard in RMarkdown without paying non-sense money for commercial software and have full control over its deployment

RMARKDOWN

Easy extension on RMarkdown's capabilities

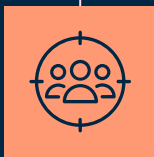


HTML WIDGETS

Add grid graphics, tabular data, gauges and value boxes

LAYOUTS

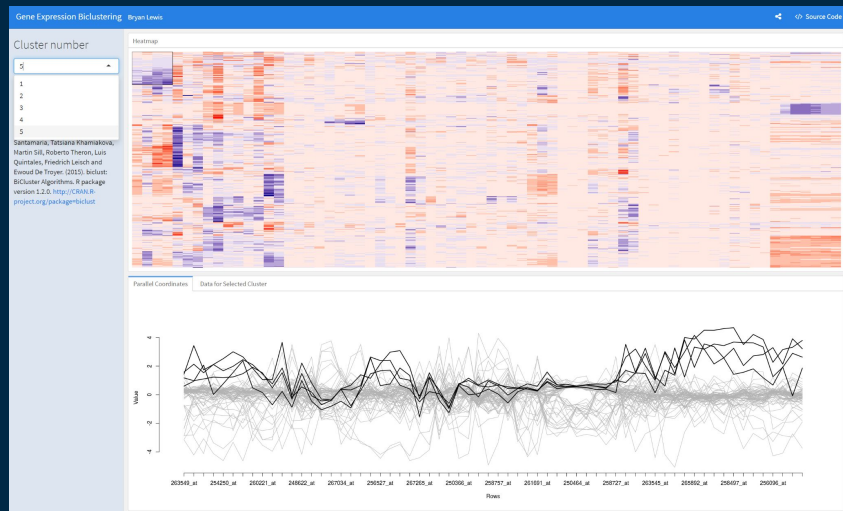
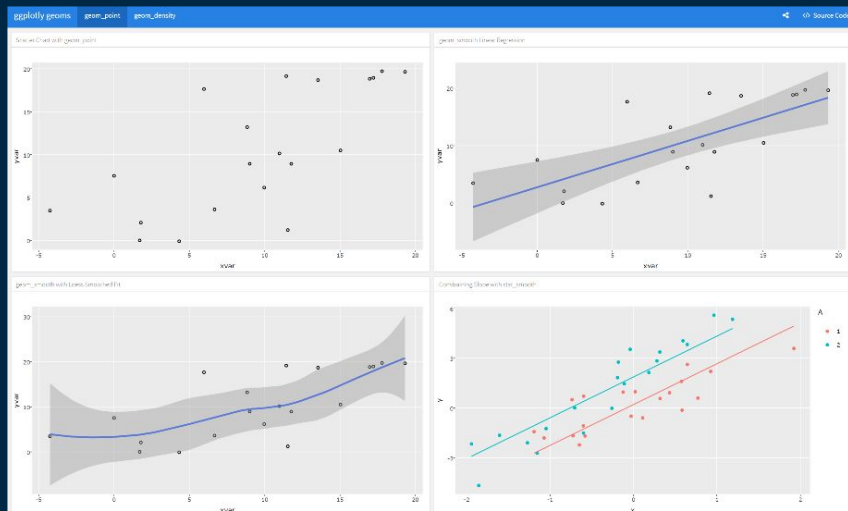
Choose between different column- or row-based formats



INTERACTIVE

Add Shiny apps and commentary to your data storyline

FLEXDASHBOARD: EXAMPLES



FLEXDASHBOARD: LAYOUTS

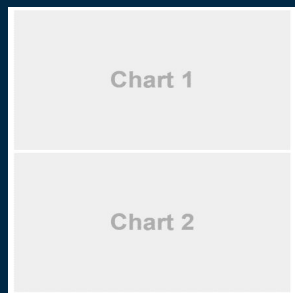
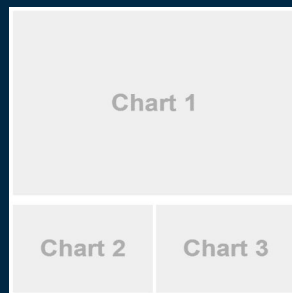


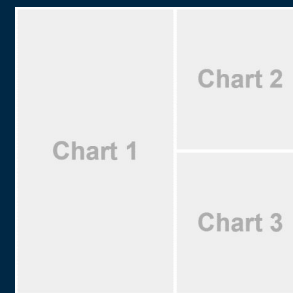
Chart Stack (Fill)



Chart Stack (Scrolling)



Focal Chart (Top)



Focal Chart (Left)



Chart Grid (2x2)



Tabset Column



Tabset Row

EXERCISE

Add a title to any of the
layouts and knit the
dashboard

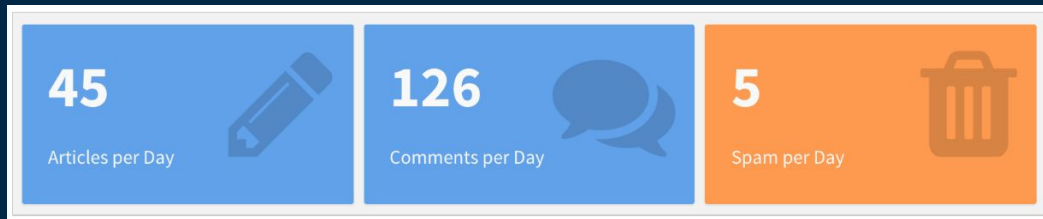
01

02 ADD-ONS

The background is a dark blue gradient. It is decorated with various geometric elements: small squares in teal, orange, and pink, some of which are solid and others are outlined. Thin white vertical lines of varying lengths are scattered across the page, some intersecting with the colored squares.

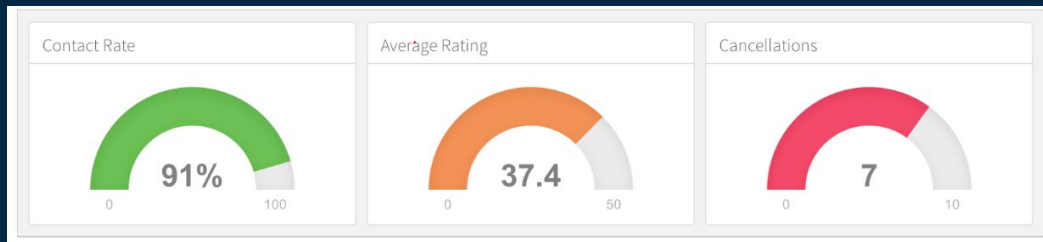
ADD-ONS

Value boxes



```
```{r} valueBox(articles, icon = "fa-pencil")```
```

## Gauges



```
```{r} gauge(rate, min = 0, max = 100, symbol = '%', gaugeSectors(success  
= c(80, 100), warning = c(40, 79), danger = c(0, 39)))```
```




ADD-ONS: CUSTOMIZE IT

Icons



Use in format: “fa-[name of the icon]” from www.fontawesome.com

Colors

	darkblue
	darkcyan
	darkgoldenrod

Find a color name for example here: <http://www.stat.columbia.edu/~tzheng/files/Rcolor.pdf>

ADD-ONS: MAKE IT INTERACTIVE

Graphs

Use `ggplotly()` function as a wrapper for your `ggplot` to turn it into an interactive graph

Tables

Use `DT::datatable(rownames=FALSE)` for creating searchable tables as part of your dashboard

DATA WE USE TODAY



Source: World Bank Open Data on
education-related topics
(data.worldbank.org)

Time period: 2010-2017

EXERCISE

Create a dashboard with
value boxes, table and an
interactive graph

02

03 DATA STORY

The background is a dark navy blue. It is decorated with various geometric elements: small squares in teal, orange, and pink, some of which are solid and others are hollow outlines. Thin white vertical lines of varying lengths are scattered across the page, some extending from the top edge.

CREATE A DATA STORY



Add self-service
Shiny app
components



Control the data
story flow with
storyboards




Share your
dashboard by
publishing to
RPods or Posit
Connect

EXERCISE


Add names of tabs and
commentary

03


WHAT TO EXPLORE NEXT?




Automate and schedule updates of your dashboard




Add your logo and other cool appearances with CSS styles




Explore flexdashboard themes



Make your dashboard mobile friendly



Learn more about flexdashboard here:
<https://pkgs.rstudio.com/flexdashboard/>



Learn more about visualizations: "Storytelling with Data: A Data Visualization Guide for Business Professionals"

Thank you



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Olga Sholderer



www.goodanalytics.nl