

flexdashboards and slides (quickly-ish)

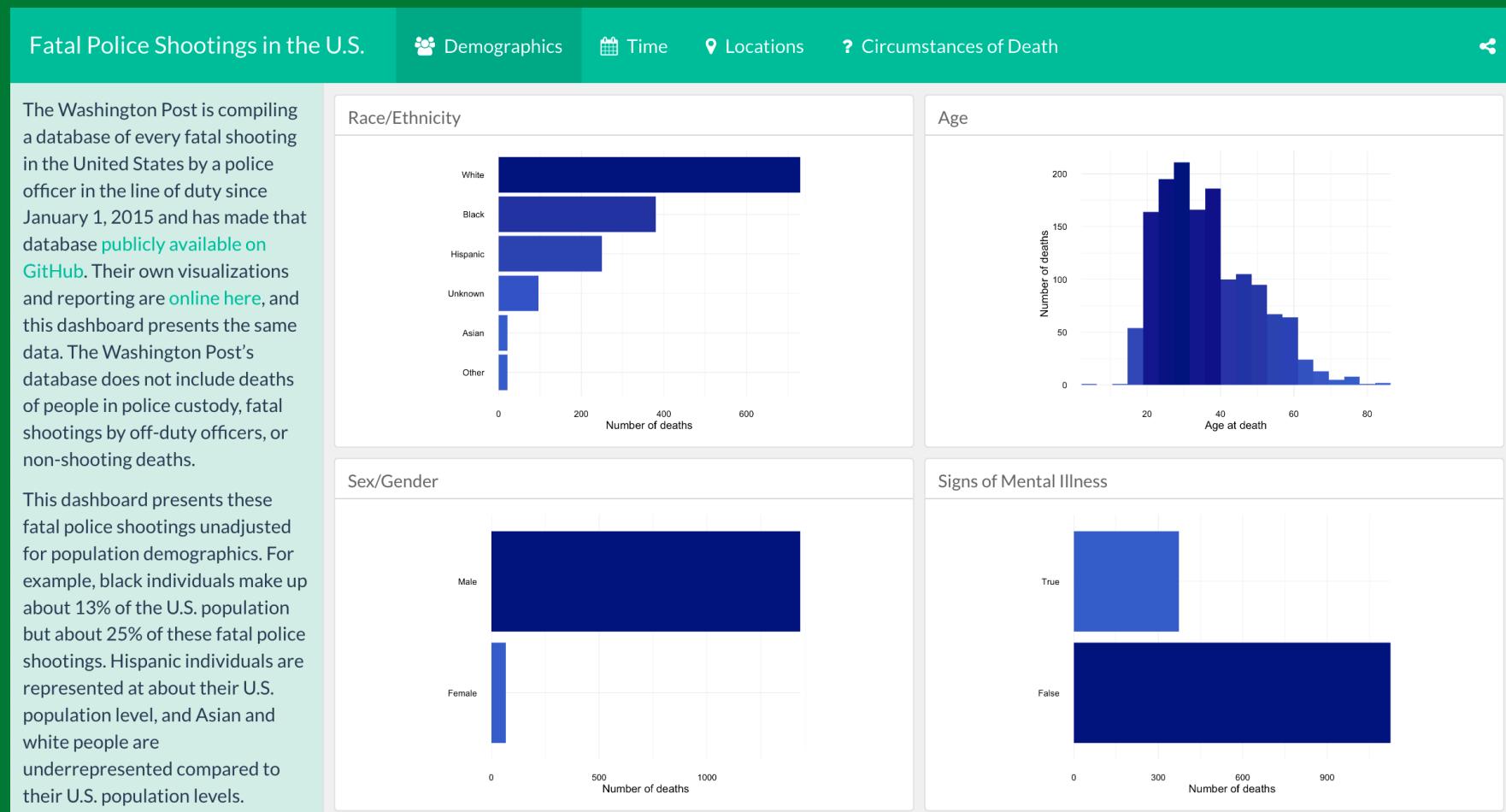
*Daniel Anderson
Week 9, Class 1*



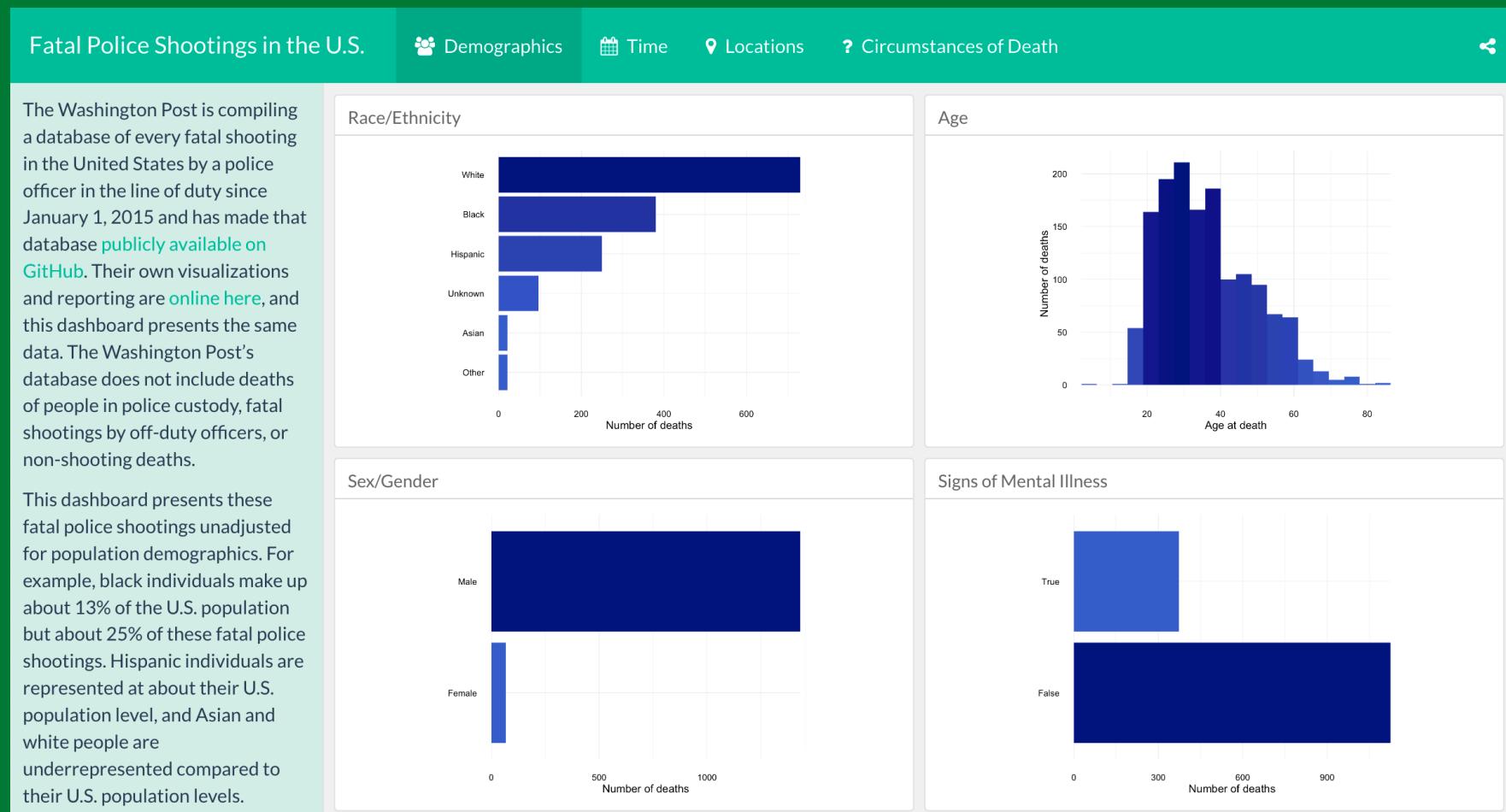
The definitive source!

<https://rmarkdown.rstudio.com/flexdashboard/>

Example



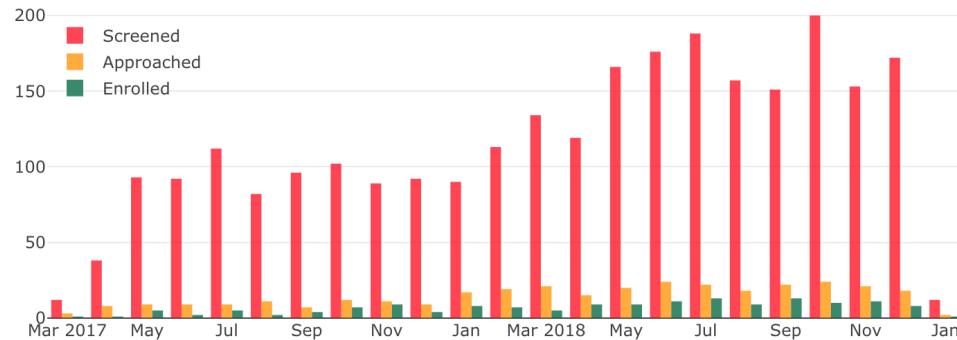
Example



By Julia Silge (see the [blog post](#), [dashboard](#), and [source code](#))



Patients Screened, Approached, and Enrolled

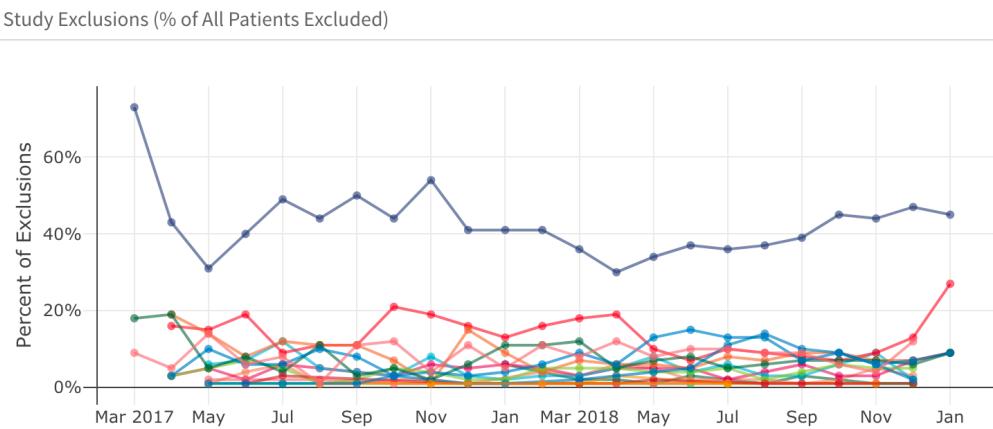


Cumulative Enrollment as of January 04, 2019



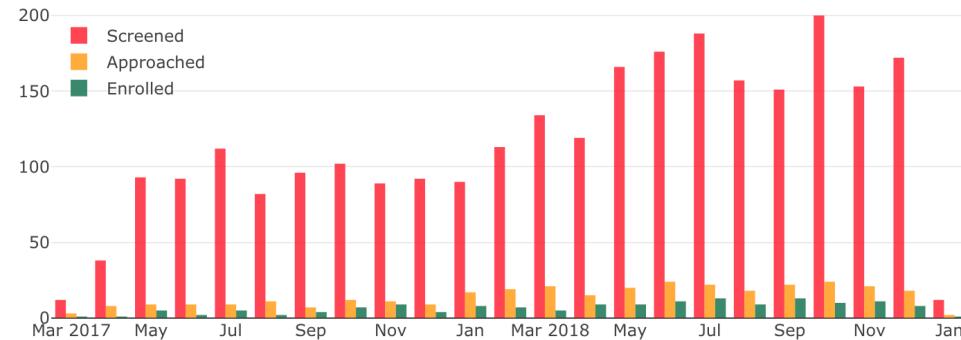
We have screened 2,639 patients; 87% were excluded and 13% approached. Of those approached, 53% refused consent and 47% were enrolled.

Cumulative Exclusions (Total: 2,485)





Patients Screened, Approached, and Enrolled

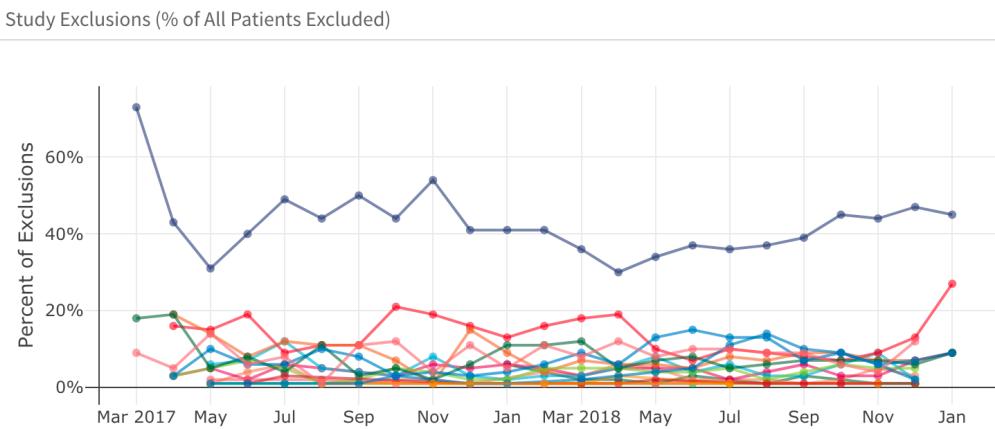


Cumulative Enrollment as of January 04, 2019



We have screened 2,639 patients; 87% were excluded and 13% approached. Of those approached, 53% refused consent and 47% were enrolled.

Cumulative Exclusions (Total: 2,485)



By Jennifer Thompson (see the blog post, dashboard, and source code)

Getting started

```
install.packages("flexdashboard")
```

Do it
knit right away
Add some plots
Play

Columns

- Define new column with

Column

- Optionally specify the width with {data-width}

Columns

- Define new column with

Column

- Optionally specify the width with {data-width}
- Annoyingly, be careful with spacing!

{data-width=650} will work

but

{data-width = 650} will not work

New squares

```
### Square title  
< r code chunk >
```

- Each time you add a square it will split the area evenly among all the squares

Thinking in rows

- Change the YAML to

```
output:  
  flexdashboard::flex_dashboard:  
    orientation: rows
```

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    orientation: rows
```

- Each `###` will then create a new column
- Add new rows with

Row

- Modify height with `{data-height=XXX}`

Pages

You can easily specify multiple pages by just specifying a Level 1 Header

```
# Page 1

Column {data-width=650}
-----
### Chart A
< r code>

Column {data-width=350}
-----
### Chart B
< r code>

### Chart C
< r code>

# Page 2
```

Sidebar

- Julia Silge's had a nice sidebar where she explained things about the flexdashboard... You can have this too!

```
Sidebar Title {.sidebar}
```

```
-----
```

Your text here. You can use markdown syntax, including
[links](<http://blah.com>), *italics*, **bolding**, etc.

Sidebar

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```
Sidebar Title {.sidebar}
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Your text here. You can use markdown syntax, including [links](<http://blah.com>), *italics*, **bolding**, etc.

- Title seems to show up (for me) in mobile version but not
- Multiple pages? Just change the separator to keep it there

```
Sidebar {.sidebar}
```

=====

Your text here. You can use markdown syntax, including [links](<http://blah.com>)

Tabs

This is actually a standard R Markdown feature, but you can use it with flexdashboards as well

```
Column {.tabset}
```

```
    ----
```

```
    ### Chart 1
```

```
    < r code>
```

```
    ### Chart 2
```

```
    < r code>
```

```
    ### Data Table
```

```
    < r code>
```

Icons

- Probably not the most important thing, but fun
- Use Font awesome!

```
# Years {data-icon="fa-calendar"}
```

HTML Widgets

Add a touch of interactivity

- Plenty of HTML widgets for R out there (see https://www.htmlwidgets.org/showcase_leaflet.html)
- {plotly} is cool

```
library(plotly)
p <- ggplot(mpg, aes(displ, cty)) +
  geom_point() +
  geom_smooth()
ggplotly(p)
```

Including Text

- If you want to include text about an overall figure, just put the text in the R Markdown doc like you normally would

```
# Base {data-icon="fa-calendar"}  
Here's a description about the plot that follows  
  
### A base R plot  
< r code>
```

What if you have tabssets?

- Works great if you want to describe all the plots/tables/content in the tabsset
- If you want to provide text for an individual plot, use >

```
Column {.tabset data-width=350}
```

```
-----
```

```
This text will describe the full tabsset
```

```
### Chart 1  
< r code>
```

```
> Here's some text for Chart 1
```

```
### Table 1  
< r code>
```

```
> Here's some text for Table 1
```

Storyboarding

- A little bit advanced, but pretty cool
- First, change the YAML

```
output:  
  flexdashboard::flex_dashboard:  
    storyboard: true
```

```
# Method {.storyboard}

### Sample Descriptives {data-commentary-width=400}
< r code>
```

```
***
```

This is some text describing what's going on with the sample, and how we mov

```
### Correlation Matrix {data-commentary-width=200}
< r code>
```

```
***
```

There is less to say here so I made the commentary box smaller

```
# Results {.storyboard}

### Plot 1 {data-commentary-width=600}
< r code>
```

```
***
```

Lots to say here. There is important

```
### Plot 2 {data-commentary-width=200}
```

```
***
```

Move along

Customization

- Add font-awesome stuff
- Change the theme

```
flexdashboard::flex_dashboard:  
  theme: readable
```

CSS

Consider creating some custom CSS (Rather complicated in this case)

Change the navigation bar to bright pink with thin blue border

```
.navbar-inverse {  
  background-color: #FE08A5;  
  border-color: #0822FE;  
}
```

Save the above code in "custom.css" then specify in the YAML

```
flexdashboard::flex_dashboard:  
  css: custom.css
```

Making sure "custom.css" is in the same directory as your flexdashboard Rmd.

Add a logo and favicon

```
output:  
  flexdashboard::flex_dashboard:  
    logo: logo.png  
    favicon: favicon.png
```

Slides (briefly)

Slides (briefly)

xaringan

/ʃæ.ˈriŋ.ɡæn/

Install

- I'd recommend going with the GitHub version

```
devtools::install_github("yihui/xaringan")
```

- If you're more comfortable using fully stable software, install from CRAN

```
install.packages("xaringan")
```

What it is

- HTML-based slides
- Produced with R Markdown
- Styled with CSS

```
14 ---  
15 class: center, middle  
16  
17 # xaringan  
18  
19 ### /ʃæ.'rin.gæn/  
20  
21 ---  
22 # What it is  
23  
24 .pull-left[  
25 * HTML-based slides  
26 * Produced with R Markdown  
27 * Styled with CSS  
28 ]  
29  
30 .pull-right[  
31 
```

Themes

This is the `uo` theme See All the available themes with
`xaringan:::list_css()`

```
names(xaringan:::list_css())
```

```
## [1] "chocolate-fonts"   "chocolate"      "default-fonts"
## [4] "default"           "duke-blue"     "hygge-duke"
## [7] "hygge"             "kunoichi"     "lucy-fonts"
## [10] "lucy"              "metropolis-fonts" "metropolis"
## [13] "middlebury-fonts"  "middlebury"    "ninjutsu"
## [16] "rladies-fonts"    "rladies"       "robot-fonts"
## [19] "robot"             "rutgers-fonts" "rutgers"
## [22] "shinobi"          "tamu-fonts"    "tamu"
## [25] "uo-fonts"          "uo"            "uol-fonts"
## [28] "uol"
```

Specify a theme

Default YAML

```
---
```

```
title: "Presentation Ninja"
subtitle: "X<br/>with xaringan"
author: "Yihui Xie"
date: "2016/12/12"
output:
  xaringan::moon_reader:
    lib_dir: libs
  nature:
    highlightStyle: github
    highlightLines: true
    countIncrementalSlides: false
---
```

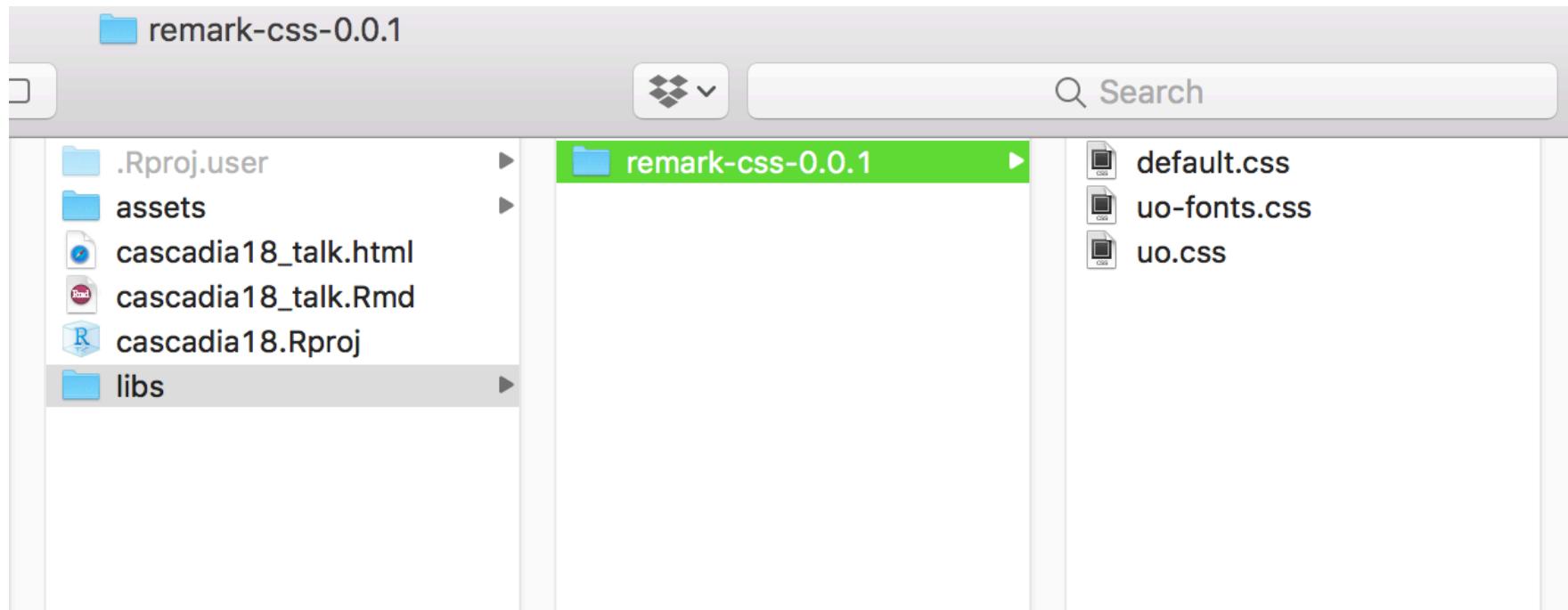
Add a theme

```
---
```

```
title: "Presentation Ninja"
subtitle: "X<br/>with xaringan"
author: "Yihui Xie"
date: "2016/12/12"
output:
  xaringan::moon_reader:
    css: ["default", "uo", "uo-fonts"]
    lib_dir: libs
  nature:
    highlightStyle: github
    highlightLines: true
    countIncrementalSlides: false
---
```

Where do the themes live?

CSS Files



How do you create your own theme?

My advice

1. Start with an existing theme
2. Modify the CSS
 - Change **colors!**
 - Change fonts! (see [here](#), import fonts with [google fonts](#))
 - Consider changes to the background
3. Once you've found the parts you want to modify, copy them into a new CSS file, and reference it from your YAML

```
---
```

```
title: "Presentation Ninja"
subtitle: "X<br/>with xaringan"
author: "Yihui Xie"
date: "2016/12/12"
output:
  xaringan::moon_reader:
    css: ["default", "uo", "uo-fonts", "my-customizations.css"]
    lib_dir: libs
  nature:
    highlightStyle: github
    highlightLines: true
    countIncrementalSlides: false
---
```

Look at CSS for existing themes

yihui / xaringan

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Code Issues 10 Pull requests 0 Projects 0 Wiki Insights

Branch: master xaringan / inst / rmarkdown / templates / xaringan / resources / Create new file Upload files Find file History

gadenbuie and yihui Fix #136: add the title slide class arguments (#139) ... Latest commit ede6a67 10 days ago

..

File	Description	Time Ago
js	move js files to the js/ directory, and rename fonts-*.css to *-fonts...	7 months ago
default-fonts.css	move js files to the js/ directory, and rename fonts-*.css to *-fonts...	7 months ago
default.css	fix #138: only define table styles for the slide content (within the...	13 days ago
default.html	Fix #136: add the title slide class arguments (#139)	10 days ago
duke-blue.css	normalize white spaces	14 days ago
hygge-duke.css	Duke CSS (#133)	24 days ago
hygge.css	Added template-independent CSS tools and an example of how to use them (3 months ago
metropolis-fonts.css	move js files to the js/ directory, and rename fonts-*.css to *-fonts...	7 months ago
metropolis.css	metropolis theme: update header margins (#107)	2 months ago
rladies-fonts.css	move js files to the js/ directory, and rename fonts-*.css to *-fonts...	7 months ago
rladies.css	add rladies.css (#76)	7 months ago
robot-fonts.css	Uploaded robot theme files (#126)	2 months ago
robot.css	Uploaded robot theme files (#126)	2 months ago
rutgers-fonts.css	add css template for Rutgers (#121)	3 months ago
rutgers.css	add css template for Rutgers (#121)	3 months ago

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Basically this

How to actually learn any new programming concept



Essential

Changing Stuff and
Seeing What Happens

O RLY?

@ThePracticalDev

Some basic features

- separate slides with `---`
- Get incremental appearance of items on the slide with `--`
- Separate into two-panel format with `pull-left[]` and `pull-right[]`
- Titles with Level 1 header
- Specify class of slides with `class`

<YAML>

```
# Title slide 1
```

Here's some text

< r code >

```
.pull-left[
```

This part will be in the left panel

```
]
```

```
.pull-right[
```

this part will be in the right panel

```
]
```

--

This will be back to the default format, and appear on click

```
class: inverse center middle
```

```
# Slide 2
```

+ New slide with a bullet in inverse, center, middle format

Background images

Code for previous slide looked like this

```
class: inverse middle  
background-image: url(https://images.pexels.com/photos/257840/pexels-photo-257840.jpeg?w=940&h=600&fit=crop)  
background-size: cover
```

Publish

Lots of options, but GitHub pages works great

- Create a repo on GitHub with everything for your slides
 - CSS files, image files, etc. (it all needs to be in there)
- Make your HTML file named `index.html`
- Change the GitHub pages setting to publish the master branch

slidex

<https://github.com/datalorax/slidex>

Transition PowerPoint slides to xaringan slides

- Currently exports one function:

```
convert_pptx("path/to/pptx", author = "Your Name")
```

slidex

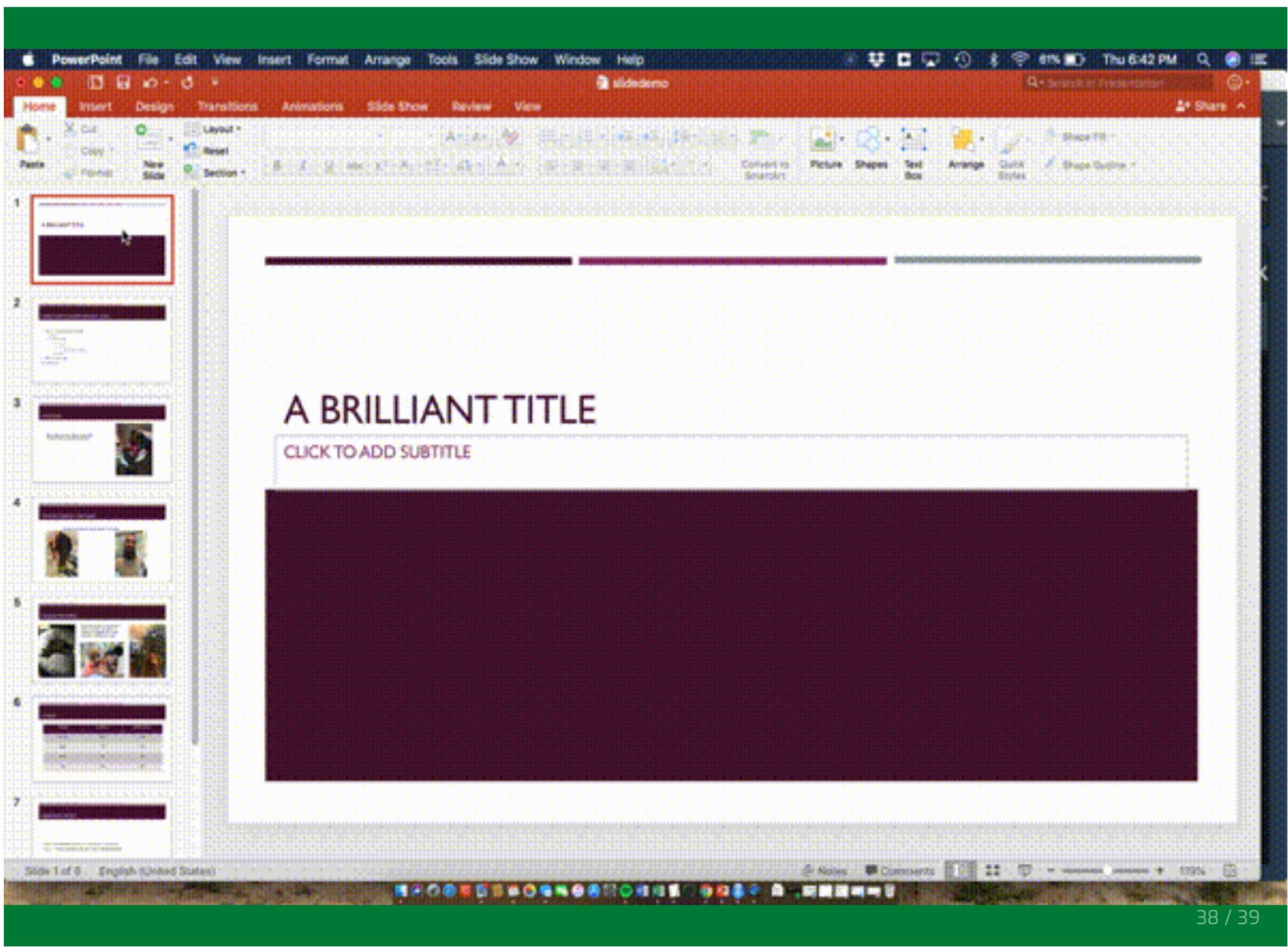
<https://github.com/datalorax/slidex>

Transition PowerPoint slides to xaringan slides

- Currently exports one function:

```
convert_pptx("path/to/pptx", author = "Your Name")
```

- Still a WIP - not perfect but can do a lot
 - Maintains bulleting (basically)
 - Maintains and reproduces tables
 - Maintains images
 - Maintains links
 - Easy selection of existing themes (additional **theme** argument).



Go forth and share your work!

