jake riley

https://rstudio.cloud/project/1788351

https://github.com/rjake/workshop-flexdashboard-shinyobjects

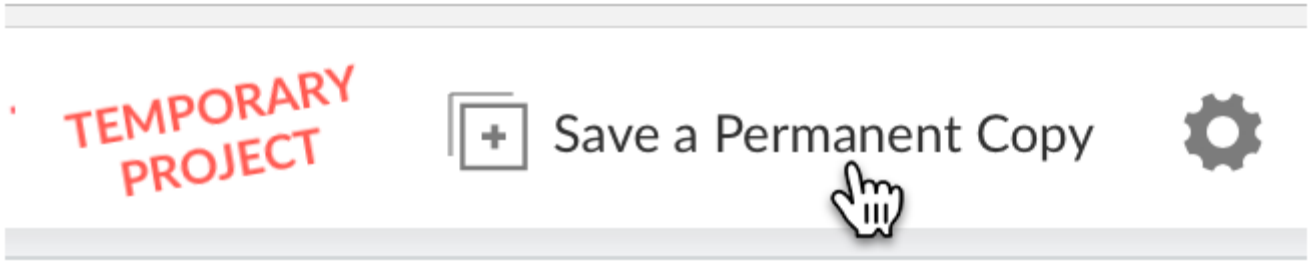
About Me

- Jake Riley
- Clinical Data Analyst at CHOP
- Avid package developer

- #dogdad
- @yake_84

Following Along

- RStudio Cloud
  - need an account
  - can sync up with GitHub
  - can copy my project https://rstudio.cloud/project/1788351



- GitHub
  - https://github.com/rjake/workshop-flexdashboard-shinyobjects

Before we get started

- Agenda
  - RMarkdown → RMarkdown + Shiny → Flexdashboard
  - shinyobjects workflow
  - Time to try out → put pictures on Google Drive
  - Reconvene & answer questions

- Out of scope
  - Tidyverse
  - All data manipulation is from the tidyverse
  - Will not be covered in detail

Registered Pets STATS BELLAS YOUR TURN Source Code

Select Age Group:

ALL
0 - 5
6 - 11
11 - 15
15+

# of Results:

1 6 20

1 3 5 7 9 11 13 15 17 19 20

This data comes from The Sunshine Coast Council in Queensland, Australia (10/1/2020).

A demo analysis can be found here

952 registered pets

92% spayed/neutered

9,761 # Cats

46,491 # Dogs

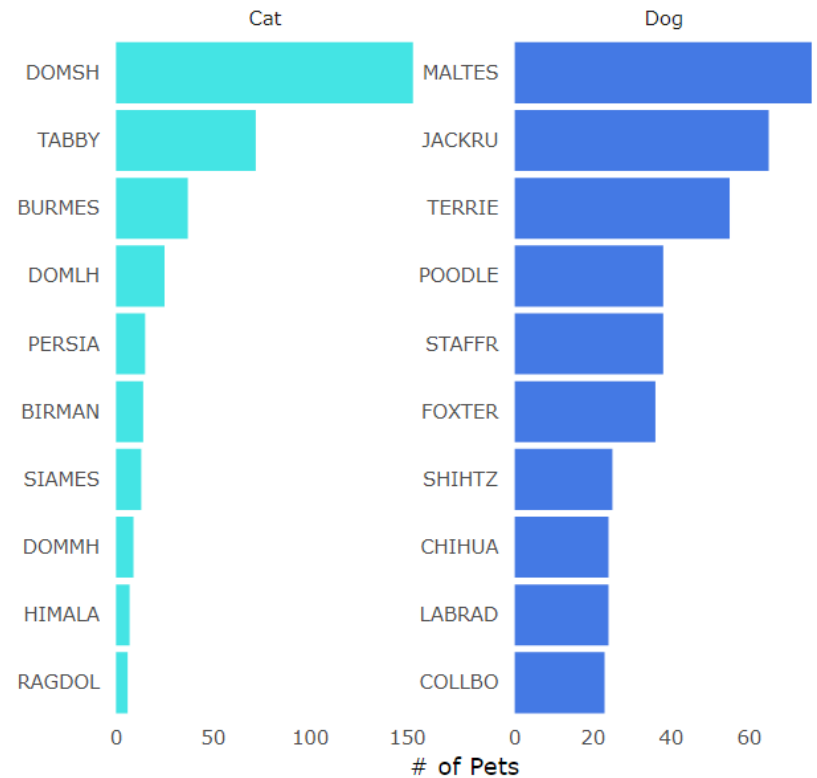
Copy CSV Excel PDF Print

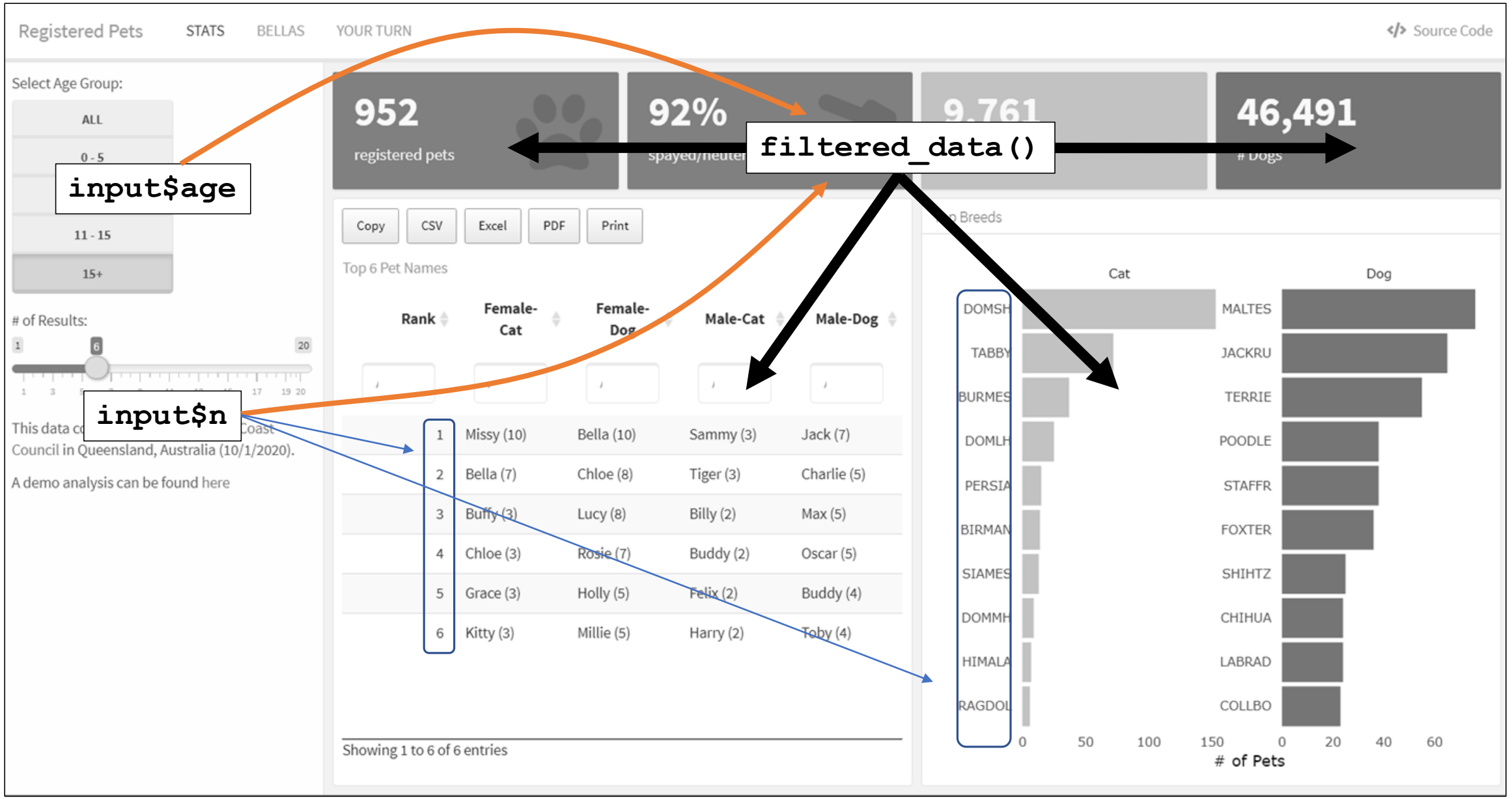
Top 6 Pet Names

Rank	Female-Cat	Female-Dog	Male-Cat	Male-Dog
1	Missy (10)	Bella (10)	Sammy (3)	Jack (7)
2	Bella (7)	Chloe (8)	Tiger (3)	Charlie (5)
3	Buffy (3)	Lucy (8)	Billy (2)	Max (5)
4	Chloe (3)	Rosie (7)	Buddy (2)	Oscar (5)
5	Grace (3)	Holly (5)	Felix (2)	Buddy (4)
6	Kitty (3)	Millie (5)	Harry (2)	Toby (4)

Showing 1 to 6 of 6 entries

Top Breeds




Registered Pets
STATS
BELLAS
YOUR TURN
Source Code
Select Age Group:
ALL
0 - 5
11 - 15
15+
input$age
# of Results:
1
6
20
input$n
This data c Coast
Council in Queensland, Australia (10/1/2020).
A demo analysis can be found here
952
registered pets
92%
9,761
46,491
# Dogs
filtered_data()
Copy
CSV
Excel
PDF
Print
Top 6 Pet Names
Rank
Female-Cat
Female-Dog
Male-Cat
Male-Dog
1 Missy (10) Bella (10) Sammy (3) Jack (7)
2 Bella (7) Chloe (8) Tiger (3) Charlie (5)
3 Buffy (3) Lucy (8) Billy (2) Max (5)
4 Chloe (3) Rosie (7) Buddy (2) Oscar (5)
5 Grace (3) Holly (5) Felix (2) Buddy (4)
6 Kitty (3) Millie (5) Harry (2) Toby (4)
Showing 1 to 6 of 6 entries
Breeds
Cat
Dog
DOMSH
TABBY
BURMES
DOMLH
PERSIA
BIRMAN
SIAMES
DOMMH
HIMALA
RAGDOL
MALTES
JACKRU
TERRIE
POODLE
STAFFR
FOXTER
SHIHTZ
CHIHUA
LABRAD
COLLBO
0
50
100
150
0
20
40
60
# of Pets

What is reactivity?

- static data: **call as is**

- user inputs: **input$x** object
  - This is made by shiny
  - handled by UI components
  - sliderInput()
  - textInput()
  - radioGroupButtons()

- dynamic data/plots/titles: **reactive**
  - text = renderText()
  - plot = renderPlot()
  - table = renderTable()
  - plotly = renderPlotly()

```
shiny::sliderInput(
  inputId = "n",
  label = "# of Results:",
  min = 1,
  max = 20,
  value = 10
)
```

```
plotly::renderPlotly({
  p <-
    filtered_data() %>%
    mutate(breed = fct_lump(breed, input$n)) %>%
    ggplot(aes(y = breed, fill = type)) +
    geom_bar() +
    labs(title = glue("Age group:{input$age_group}"))

  plotly::ggplotly(p)
})
```

It can get really complicated

```
selected_provider <- reactive(
  raw_providers %>%
    filter(ad_login == input$provider)
)


peers <- reactive(
  raw_providers %>%
    filter(is_app == selected_provider()$is_app)
)
```

```
peers_titles <- reactive(
  peers() %>%
    distinct(title) %>%
    pull() %>%
    sort() %>%
    glue_collapse(", ")
)


main_metrics <- reactive(
  raw_data %>%
    filter(title %in% peers_titles()) %>%
    mutate(
      is_provider = (ad_login == input$provider),
      label = ifelse(is_provider, "Selected", "Peer Avg.")
    )
)
```

shinyobjects workflow

- create a **dummy input** object

- **load_reactive_objects()**
  - Changes reactive objects to static objects in your global environment
  - Entirely under the hood

- **convert_selection()**
  - converts just the code highlighted in source pane

- **view_ui()**
  - see what UI components will look like

- https://rjake.github.io/shinyobjects/