Cheatography

Data Visualization in R through ggvis Cheat Sheet

by Anuj Shukla 18BCE0163 (anujshukla) via cheatography.com/126293/cs/24471/

Installation

install.packages("ggvis")
library(ggvis)

-install.packages("ggvis") will install all the required packages you need for visualization through ggvis
-library(ggvis) will call the ggvis package to be used in your visualization

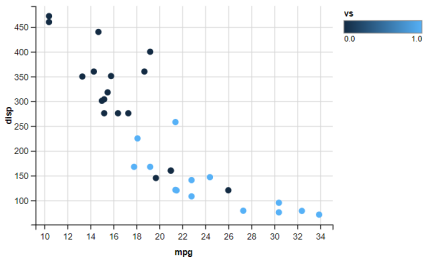
Layers

Simple Layer

```
mtcars %>% ggvis(~mpg, ~disp, fill = ~vs) %>% layer_points()
```

Here I am using the dataset mtcars and visualising it through layer points.

Output

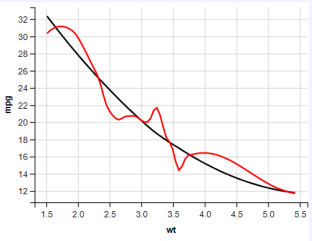


Multiple Layer

```
mtcars %>% ggvis(~wt, ~mpg) %>%
  layer_smooths(span = 1) %>%
  layer_smooths(span = 0.3, stroke := "red")
```

I have taken the mtcars dataset and visualized the multiple layers using different strokes

Output

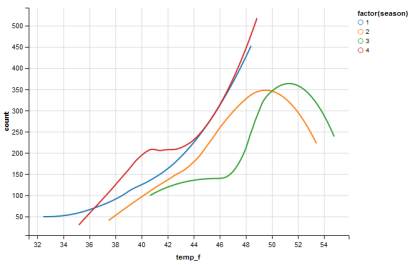


Group_by

```
train_tbl %>% group_by(season) %>% ggvis(~temp_f,~count, stroke = ~factor(season)) %>% layer_smooths()
```

I have taken season dataset here, and season is a categorical variable. And we have grouped it and then used stroke to highlight the different seasons.

Output



Popular In-Built plot types

1. layer_points()
2. layer_lines()
3. layer_bars()
4. layer_smooths()
5. layer_histograms()

Global Vs Local properties

A property that is set inside ggvis() is applied globally. While a property set inside layer_<marks>() is applied locally. Local properties can override global properties when applicable.

Graphics

The graphics produced by ggvis are fundamentally web graphics and work very differently from traditional R graphics. This allows us to implement exciting new features like interactivity
The goal of ggvis is to make it easy to build interactive graphics for exploratory data analysis. ggvis has a similar underlying theory to ggplot2 (the grammar of graphics).

Scale Types

Any visual property in the visualization can be adjusted with scale(). ggvis provides several different functions for creating scales:

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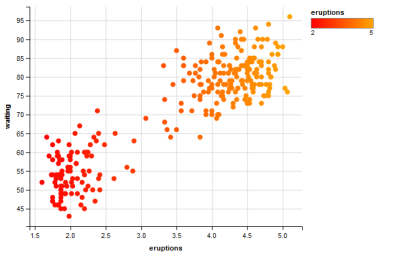
Scale Types (cont)

```
scale_datetime(), scale_logical(), scale_nominal(), scale_numeric(), scale_singular()
Code
faithful %>%
ggivs(~eruptions,~waiting, fill = ~eruptions) %>%
layer_points() %>%
scale_numeric("fill", range = c("red","orange"))
```

Output



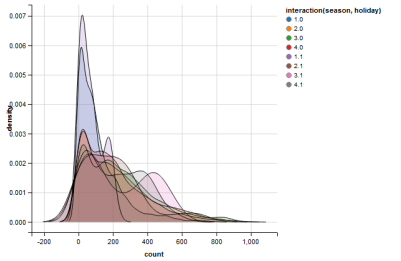
ggvis & interaction ()

```
train_tbl %>%
group_by(season,holiday) %>%
ggvis(~count, fill = ~interaction(season,holiday)) %>%
layer_densities()
```

We can also group data based on interaction of two or more variables.
group_by() creates unique groups for each distinct combination of values within the grouping variables.

ungroup() can remove the grouping information.
interaction() can map the properties to unique combinations of the variables

Output

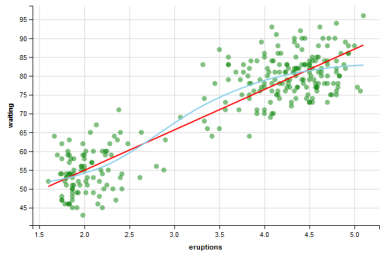


Model Prediction

```
faithful %>%
ggvis(~eruptions,~waiting) %>%
layer_points(fill := "green", fillOpacity := 0.5) %>%
layer_model_predictions(model = "lm", stroke := "red") %>%
layer_smooths(stroke := "skyblue")
```

layer_model_predictions() plots the prediction line of a model fitted to the data.
layer_model_predictions(model = "lm")

Output



Interactive Plots

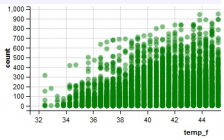
ggivs comes several

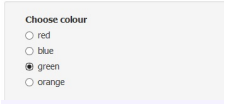
input_checkbox(),
input_checkboxgroup
input_numeric(),
input_radiobuttons(),
input_select(),
input_slider(), and inp

label = "ABCD " , cho
black") -
value = "black" - Usec
text()
map = as.name used
to return variable nam

Are the common argu
these functions.

Output





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Published 27th September, 2020.
Last updated 27th September, 2020.