How to Use R Graph Galery: HeatMap Study Case

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Steps

1. Visit https://r-graph-gallery.com/
2. Look for the graph that we are interested in building it (in this case, Heat Map)
3. Search for the Code that suits your style (i.e. ggplot).
4. Follow the tutorial presented there (copy and paste it onto your code editor).

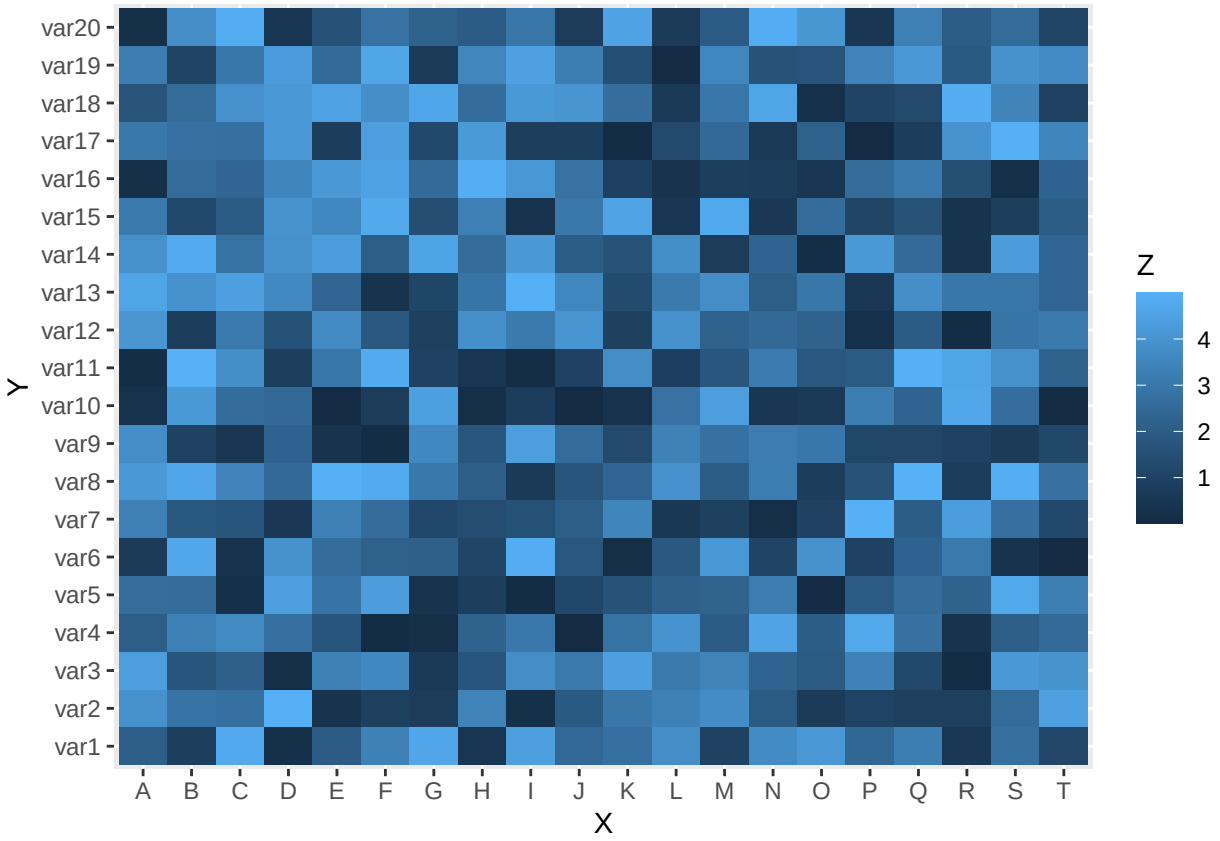
Heat Map

Dummy Dataset (taken from R Graph Galery)

```
# Library
library(tidyverse)
```

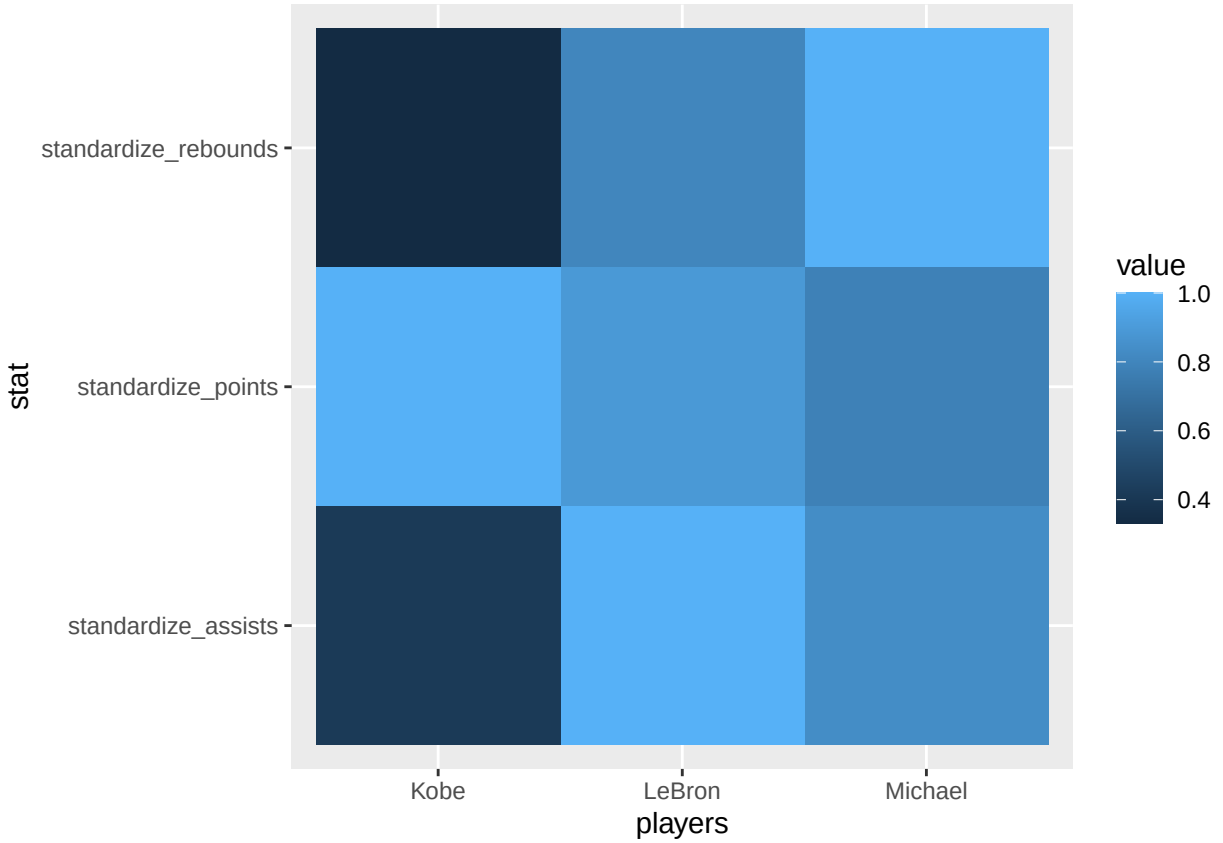
```
## -- Attaching packages --------------------------------------- tidyverse 1.3.1 --

## v ggplot2 3.3.6     v purrr   0.3.4
## v tibble  3.1.7     v dplyr   1.0.9
## v tidyr   1.2.0     v stringr 1.4.0
## v readr   2.1.2     v forcats 0.5.1

## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
# Dummy data
x <- LETTERS[1:20]
y <- paste0("var", seq(1,20))

# Create a Data Frame from All Combinations of Factor Variables
?expand.grid
data <- expand.grid(X=x, Y=y) # this will generate 400 unique combination (20 x 20)

# Generate values by uniform distribution
?runif
data$Z <- runif(400, 0, 5)

# Heatmap
ggplot(data, aes(X, Y, fill= Z)) +
  geom_tile()
```



Sensible Dataset

```
players <- c("Michael", "LeBron", "Kobe")
points <- c(35, 40, 45)
assists <- c(10, 12, 5)
rebounds <- c(15, 12, 5)

# Create a tibble data frame
basketball <- tibble(players, points, assists, rebounds)

# standardize the value so that all values have the same range
basketball$standardize_points <- basketball$points/max(basketball$points)
basketball$standardize_assists <- basketball$assists/max(basketball$assists)
basketball$standardize_rebounds <- basketball$rebounds/max(basketball$rebounds)

basketball_standardize <- select(basketball, "players", "standardize_points", "standardize_assists", "s

# We need to convert the wide tibble into long tibble using pivot_longer() function
long_basketball_scaled <- pivot_longer(data = basketball_standardize, cols = c("standardize_points", "s

# make the heatmap plot
ggplot(long_basketball_scaled, aes(x = players, y = stat, fill= value)) +
  geom_tile()
```


standardize_rebounds
standardize_points
standardize_assists
stat
Kobe
LeBron
Michael
players
value
1.0
0.8
0.6
0.4