

# ggPlot-Facets

## i ggPlot-facets

1. `facet_wrap (x, ncol)`
2. `facet_grid (x,y, ncol, nrow)`

```
library(tidyverse)
```

## Data

```
head(iris)
```

|   | Sepal.Length | Sepal.Width | Petal.Length | Petal.Width | Species |
|---|--------------|-------------|--------------|-------------|---------|
| 1 | 5.1          | 3.5         | 1.4          | 0.2         | setosa  |
| 2 | 4.9          | 3.0         | 1.4          | 0.2         | setosa  |
| 3 | 4.7          | 3.2         | 1.3          | 0.2         | setosa  |
| 4 | 4.6          | 3.1         | 1.5          | 0.2         | setosa  |
| 5 | 5.0          | 3.6         | 1.4          | 0.2         | setosa  |
| 6 | 5.4          | 3.9         | 1.7          | 0.4         | setosa  |

In order to do facet plot across variables Sepal.Length, Sepal.Width, Petal.Length and Petal.Width, we need to reshape the data to `pivot_longer`.

```
col_order<- c("Species","Sepal.Length","Sepal.Width",  
              "Petal.Length","Petal.Width")  
irisA <- iris[,col_order]  
head(irisA)
```

|   | Species | Sepal.Length | Sepal.Width | Petal.Length | Petal.Width |
|---|---------|--------------|-------------|--------------|-------------|
| 1 | setosa  | 5.1          | 3.5         | 1.4          | 0.2         |
| 2 | setosa  | 4.9          | 3.0         | 1.4          | 0.2         |
| 3 | setosa  | 4.7          | 3.2         | 1.3          | 0.2         |

|   |        |     |     |     |     |
|---|--------|-----|-----|-----|-----|
| 4 | setosa | 4.6 | 3.1 | 1.5 | 0.2 |
| 5 | setosa | 5.0 | 3.6 | 1.4 | 0.2 |
| 6 | setosa | 5.4 | 3.9 | 1.7 | 0.4 |

```
iris_long <- irisA %>%
  pivot_longer(
    !Species,
    names_to = "Leaves",
    values_to = "cm")
head(iris_long)
```

```
# A tibble: 6 x 3
  Species Leaves      cm
  <fct>   <chr>    <dbl>
1 setosa Sepal.Length  5.1
2 setosa Sepal.Width  3.5
3 setosa Petal.Length  1.4
4 setosa Petal.Width  0.2
5 setosa Sepal.Length  4.9
6 setosa Sepal.Width   3
```

### facet\_wrap

- wraps a 1-d ribbon of panels into 2-d
- to specify number of columns (`ncol=3`) or number of rows (`nrow=2`) in a panel layout.

```
p <- ggplot(iris_long, aes(x=Species, y=cm))+
  geom_boxplot(aes(fill=Species))
p+facet_wrap(~Leaves, ncol=2)
```



### facet\_grid

- produces 2-d grid of panels defined by variables for rows and columns.

```
q <- ggplot(iris_long, aes(x=Species, y=cm))+
  geom_boxplot(aes(fill=Species))
q + facet_grid(cols = vars(Leaves))
```

