

# The basics of ggplot2

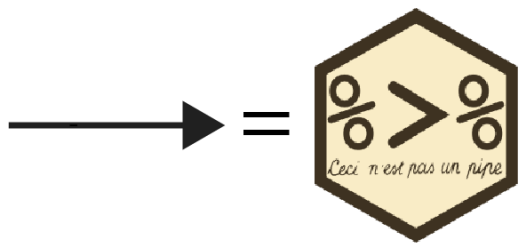
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*An overview of the most powerful R  
library for data visualization*

[Yan-holtz.com/teaching](http://Yan-holtz.com/teaching)

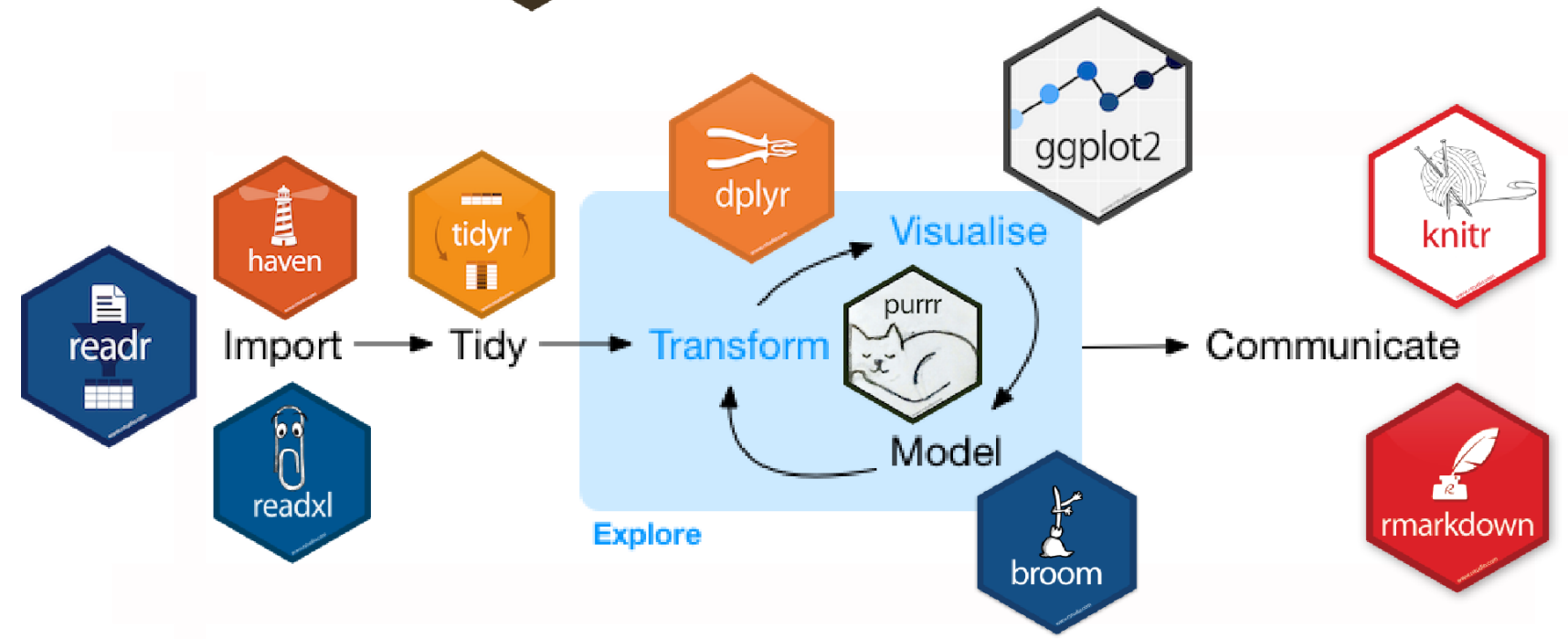
Base R





=

A collection of R packages designed for data science



data.frames



factors



strings





Base R

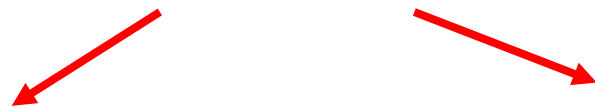


```
data[ , "country"]
```

```
data %>%  
  select(country)
```

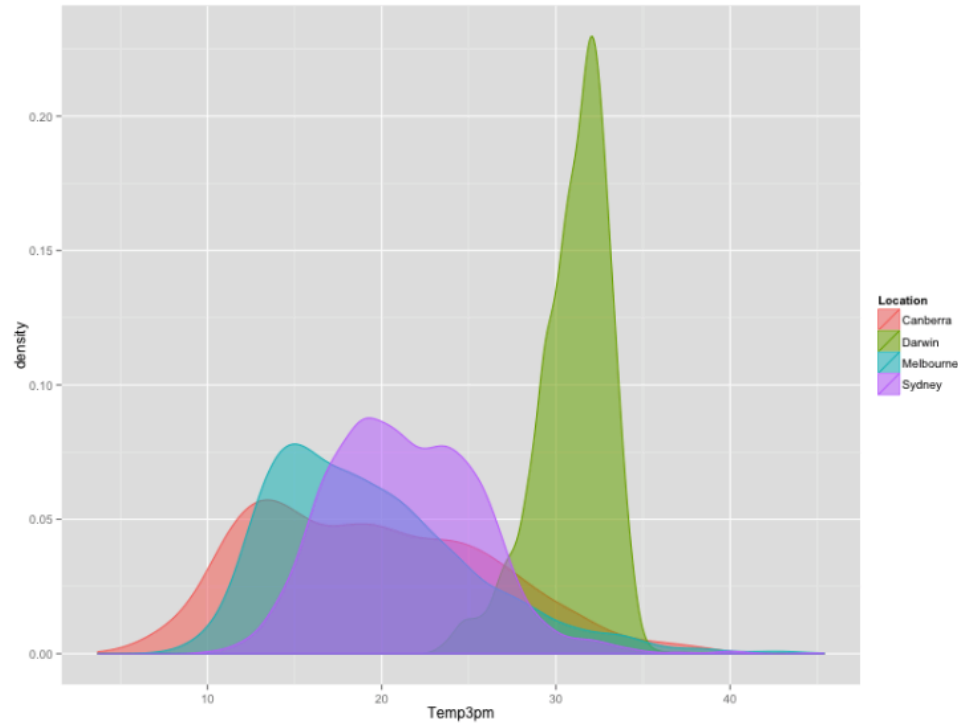
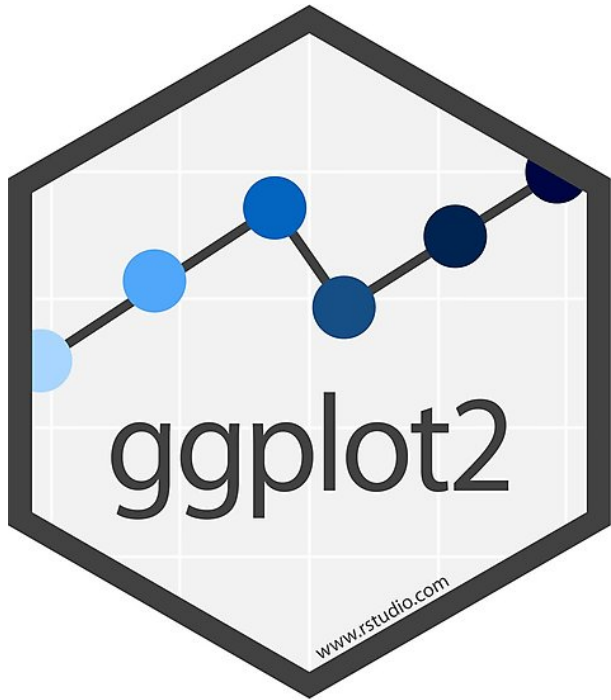


Base R



```
data[ which(data$year==2007), c("lifeExp", "gdpPercap", "year")]
```

```
data %>%  
  select(lifeExp, gdpPercap, year) %>%  
  filter(year==2007)
```



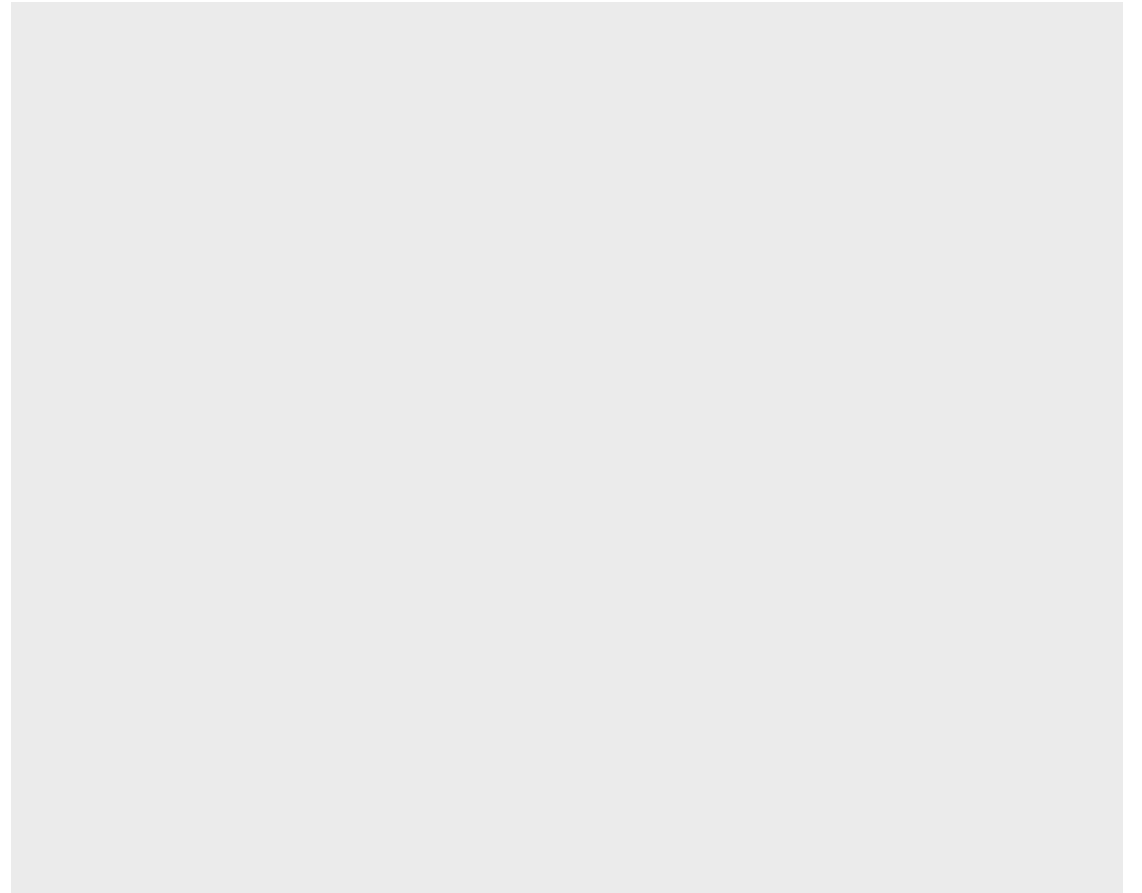
- Creator: Hadley Wickham
- Based on the Grammar of Graphic

```
library(ggplot2)
```

**ggplot()**

Data

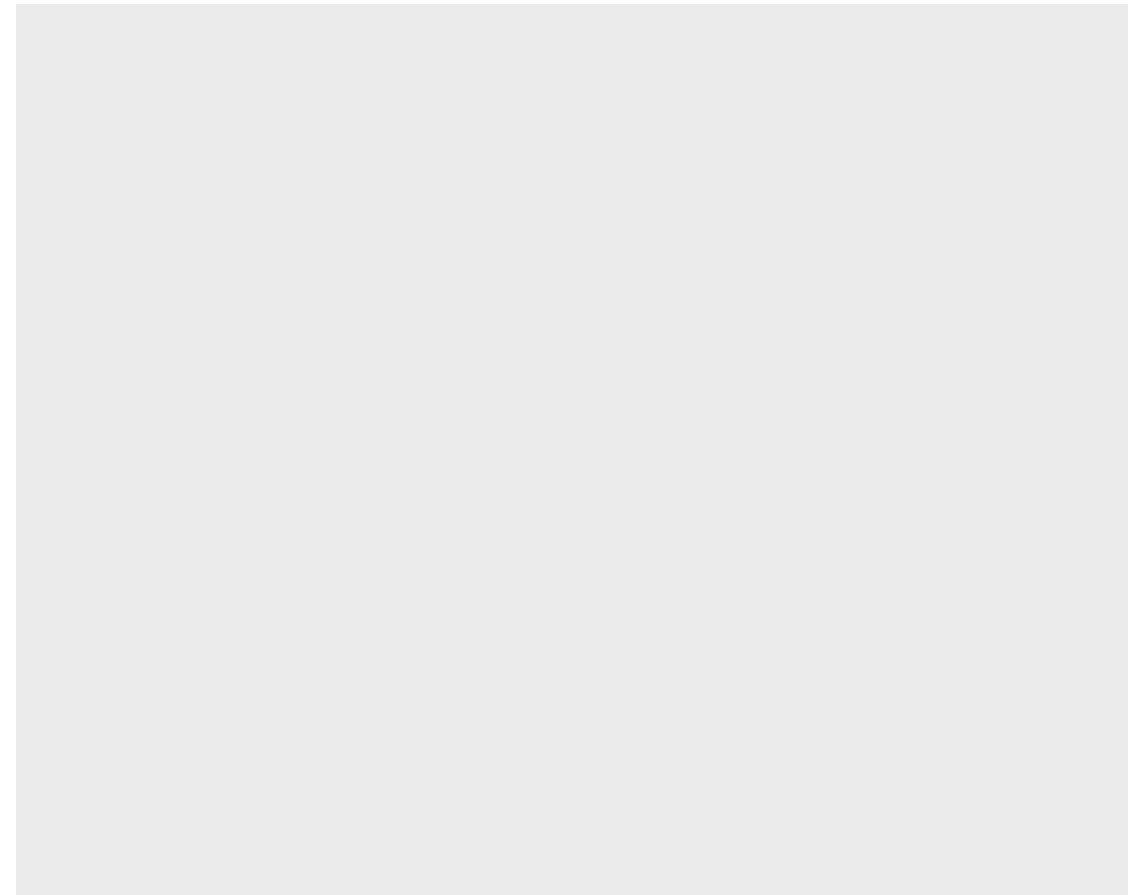
<u>Sepal.Length</u>	<u>Sepal.Width</u>
5.1	3.5
4.9	3.0
4.7	3.2



```
ggplot(data=data)
```

Data

Sepal.Length	Sepal.Width
5.1	3.5
4.9	3.0
4.7	3.2

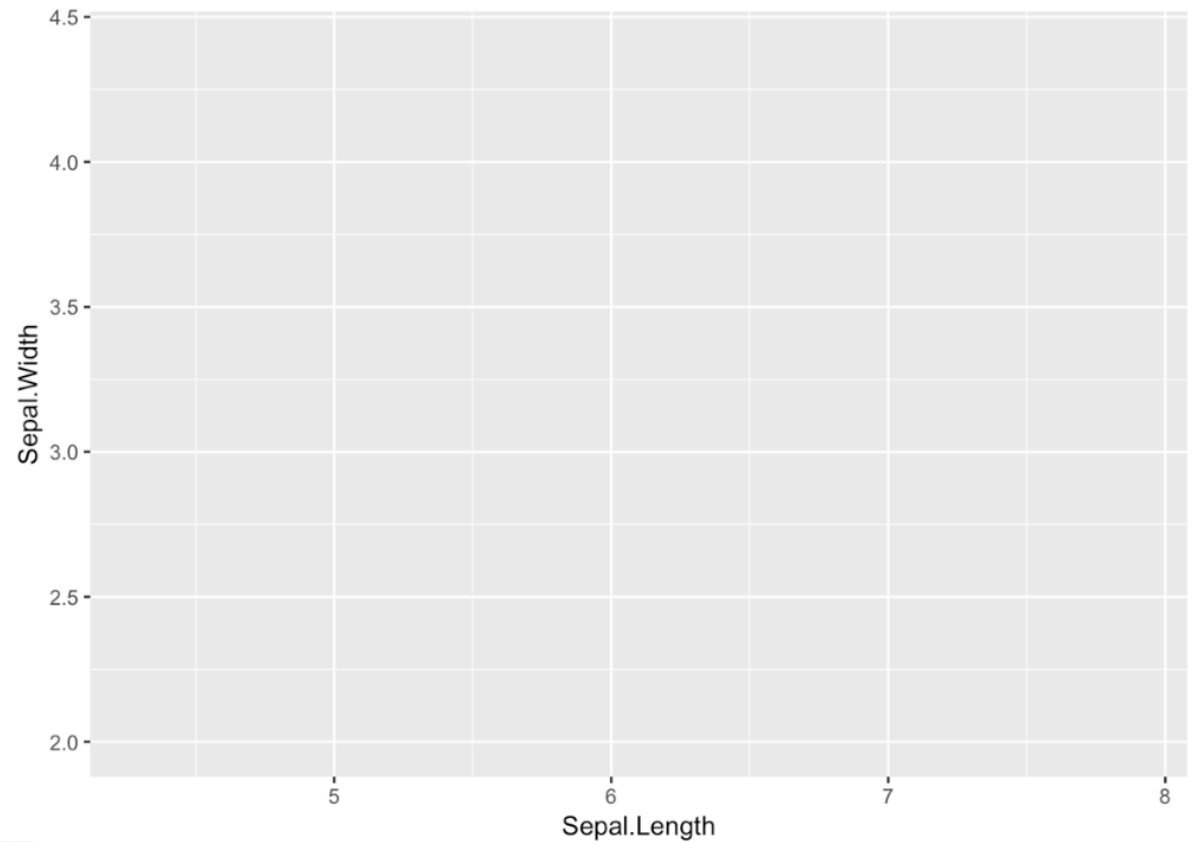




```
ggplot(data=data, aes(x=Sepal.Length, y=Sepal.Width))
```

Data

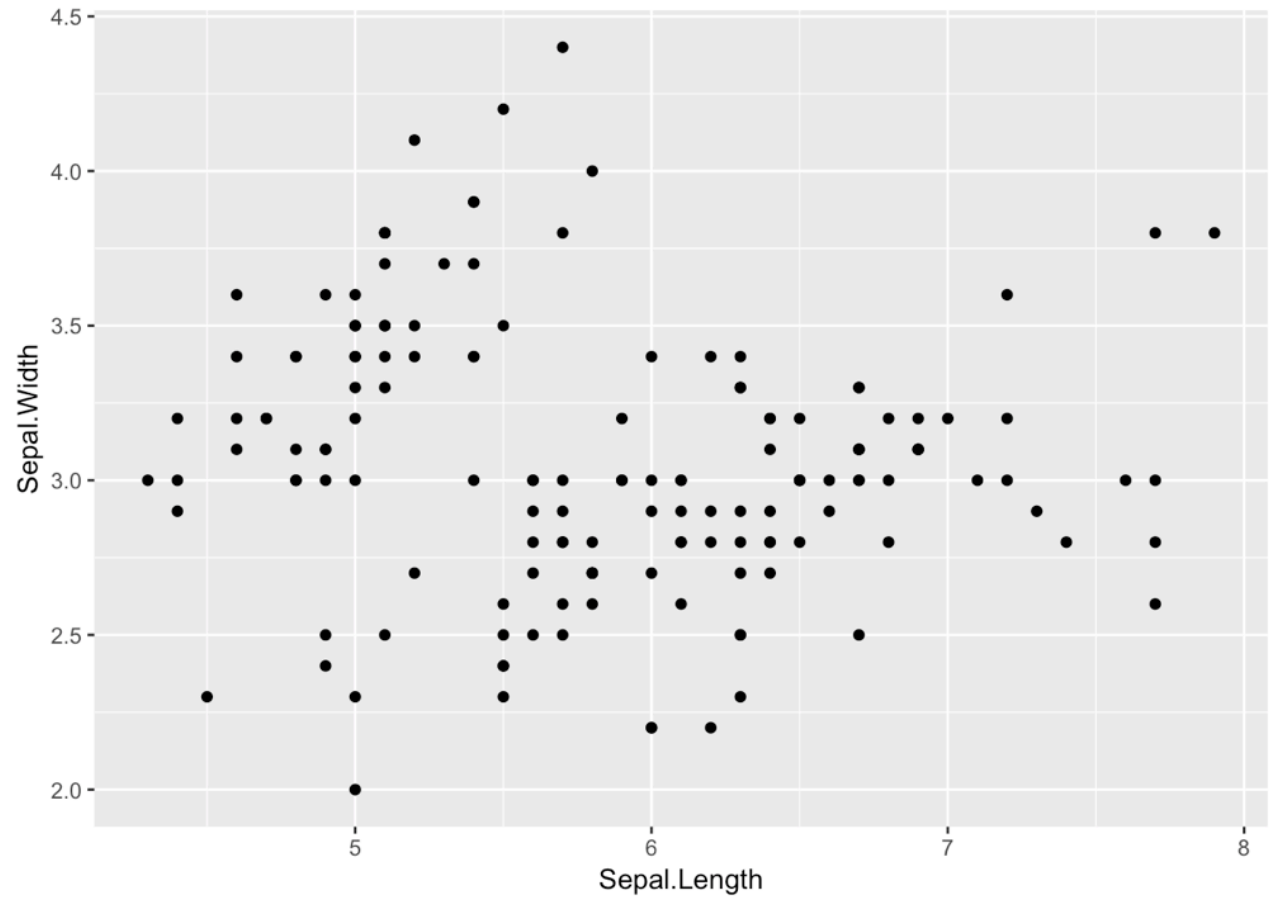
Sepal.Length	Sepal.Width
5.1	3.5
4.9	3.0
4.7	3.2



```
ggplot(data=data, aes(x=Sepal.Length, y=Sepal.Width)) +  
  geom_point()
```

Data

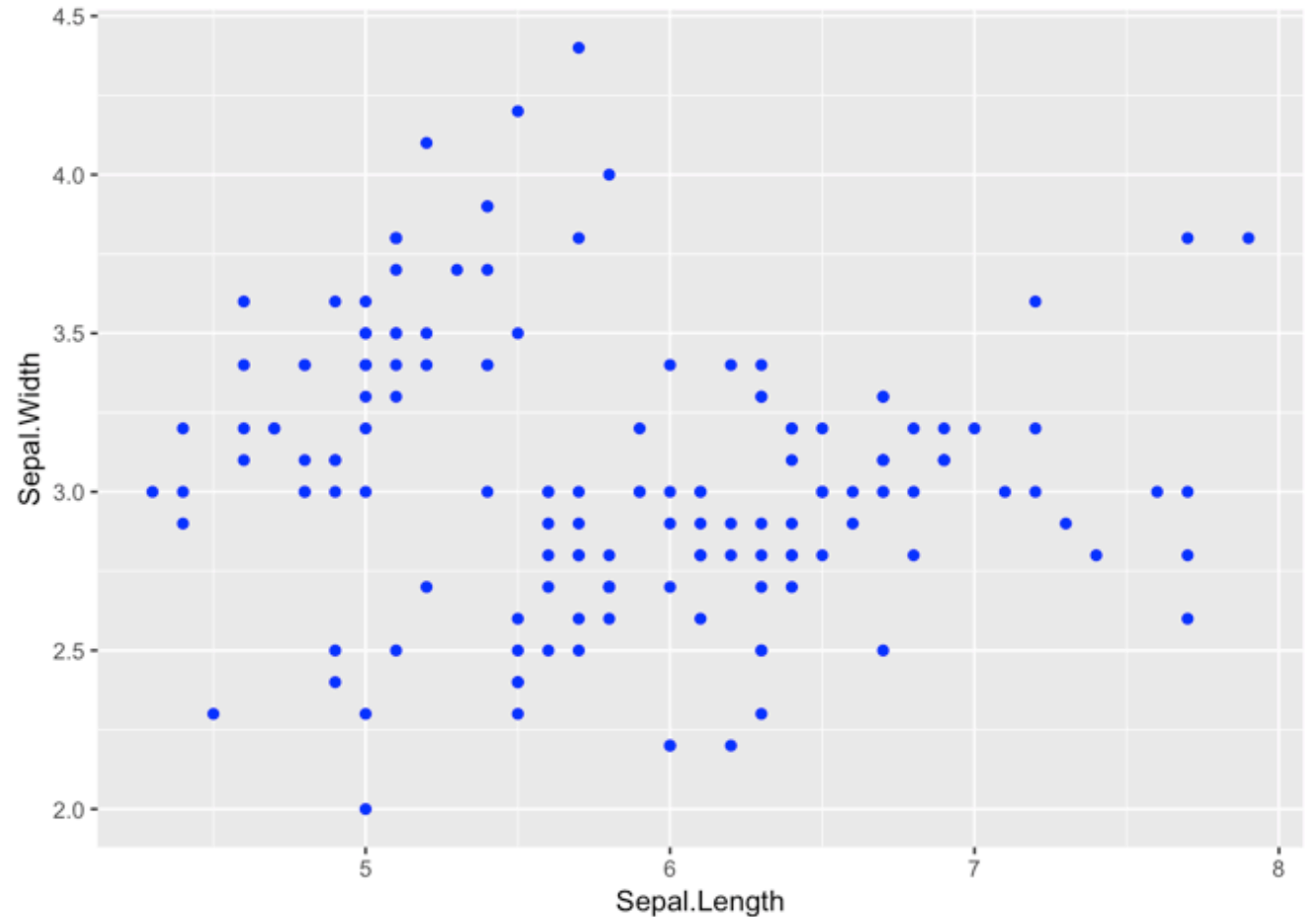
Sepal.Length	Sepal.Width
5.1	3.5
4.9	3.0
4.7	3.2



```
ggplot(data=data, aes(x=Sepal.Length, y=Sepal.Width)) +  
  geom_point(color="blue")
```

Data

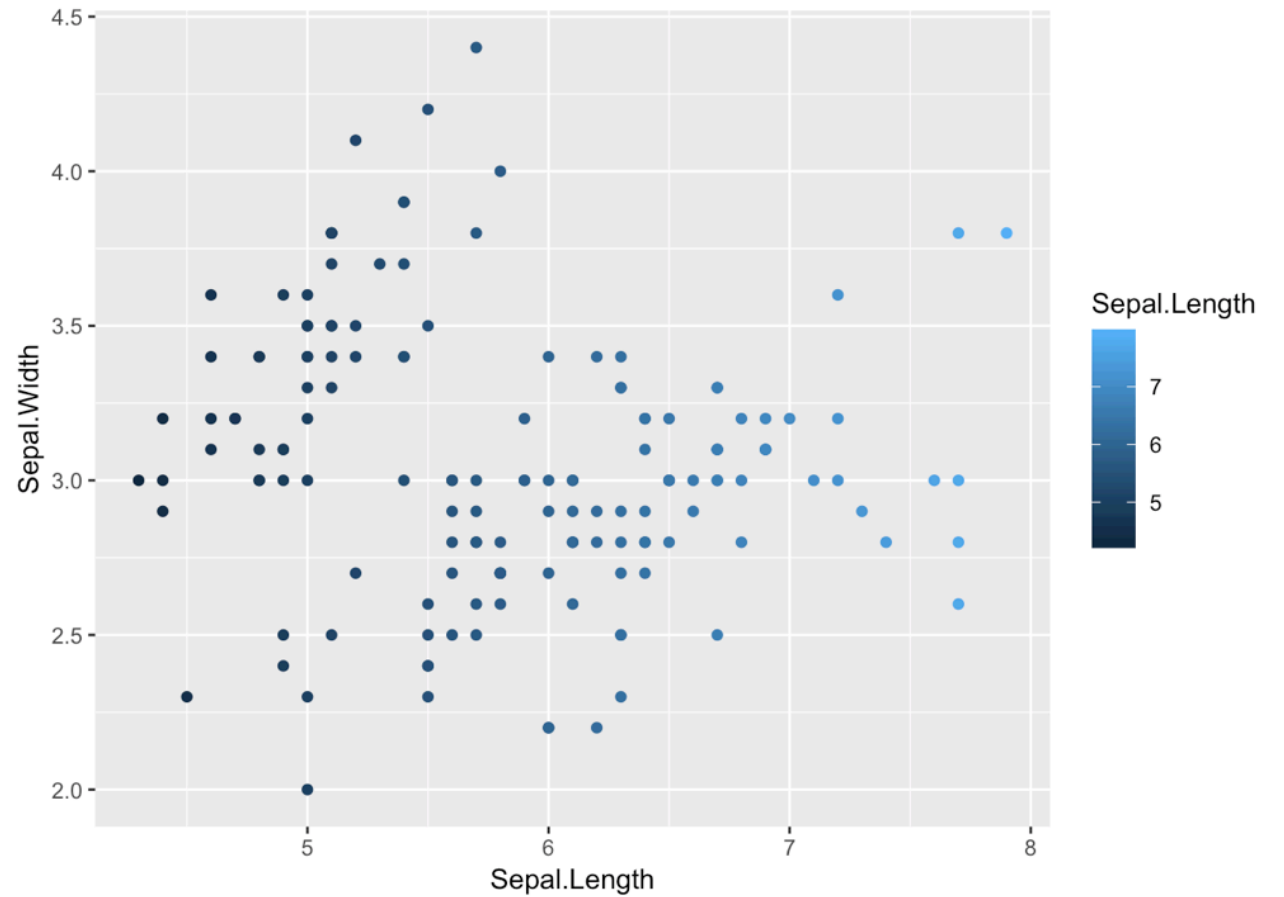
Sepal.Length	Sepal.Width
5.1	3.5
4.9	3.0
4.7	3.2



```
ggplot(data=data, aes(x=Sepal.Length, y=Sepal.Width, color=Sepal.Length)) +  
  geom_point()
```

Data

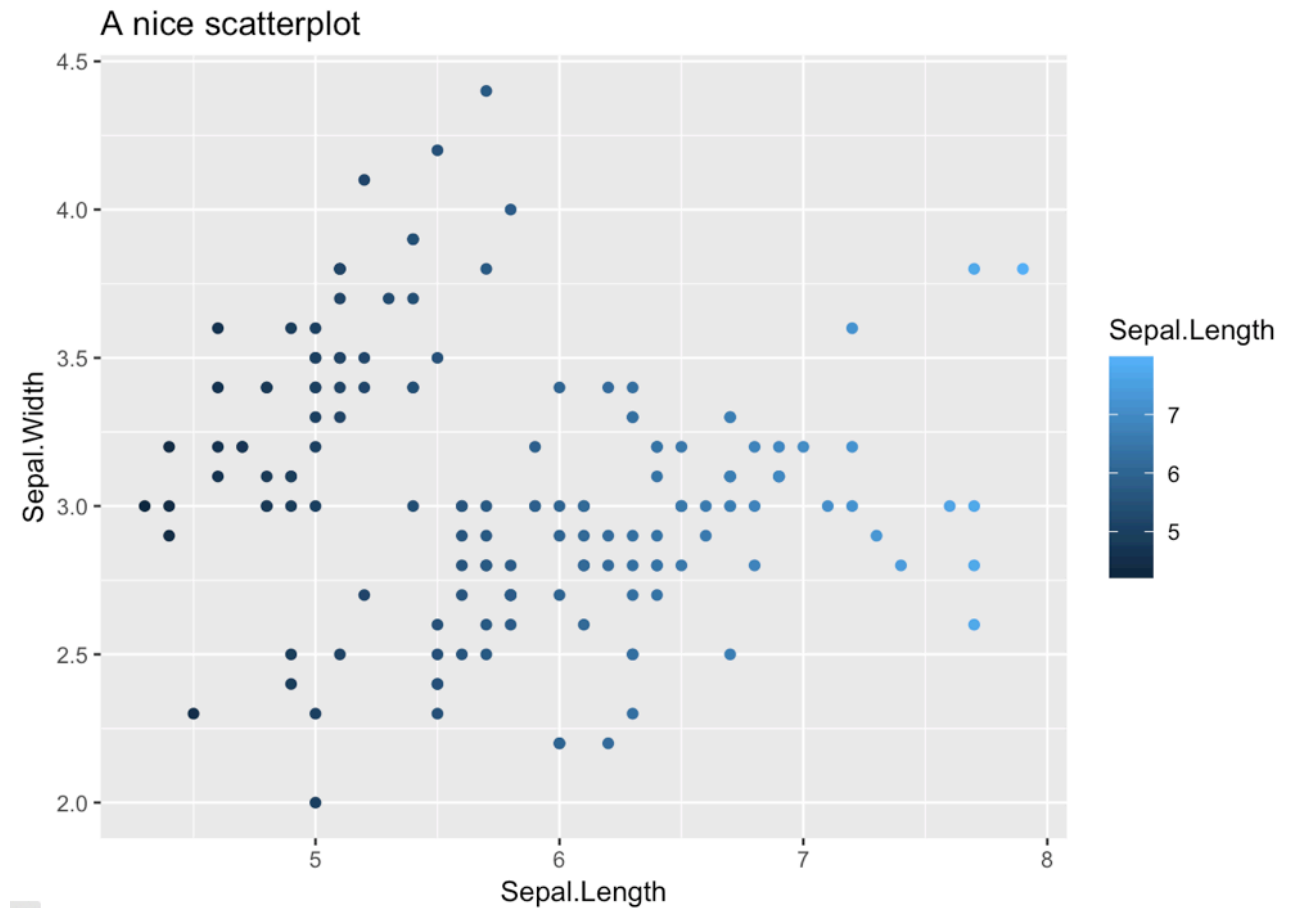
Sepal.Length	Sepal.Width
5.1	3.5
4.9	3.0
4.7	3.2



```
ggplot(data=data, aes(x=Sepal.Length, y=Sepal.Width, color=Sepal.Length)) +  
  geom_point() +  
  ggtitle("A nice scatterplot")
```

Data

Sepal.Length	Sepal.Width
5.1	3.5
4.9	3.0
4.7	3.2



Learn by doing

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[r-graph-gallery.com/teaching](https://www.r-graph-gallery.com/teaching)

Useful link

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Cheatsheet: [link](#)

Home: [link](#)

R Graph Gallery: [R-graph-gallery.com](https://www.r-graph-gallery.com)

# Thanks

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Slides:

[Yan-holtz/teaching](https://yan-holtz.github.io/teaching/)



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[github.com/holtzy](https://github.com/holtzy)