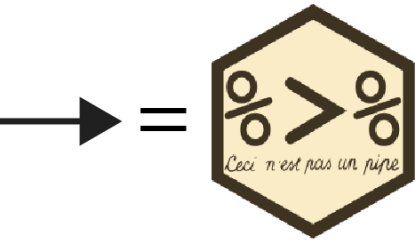
The basics of ggplot2

An overview of the most powerful R library for data visualization

Yan-holtz.com/teaching

Base R



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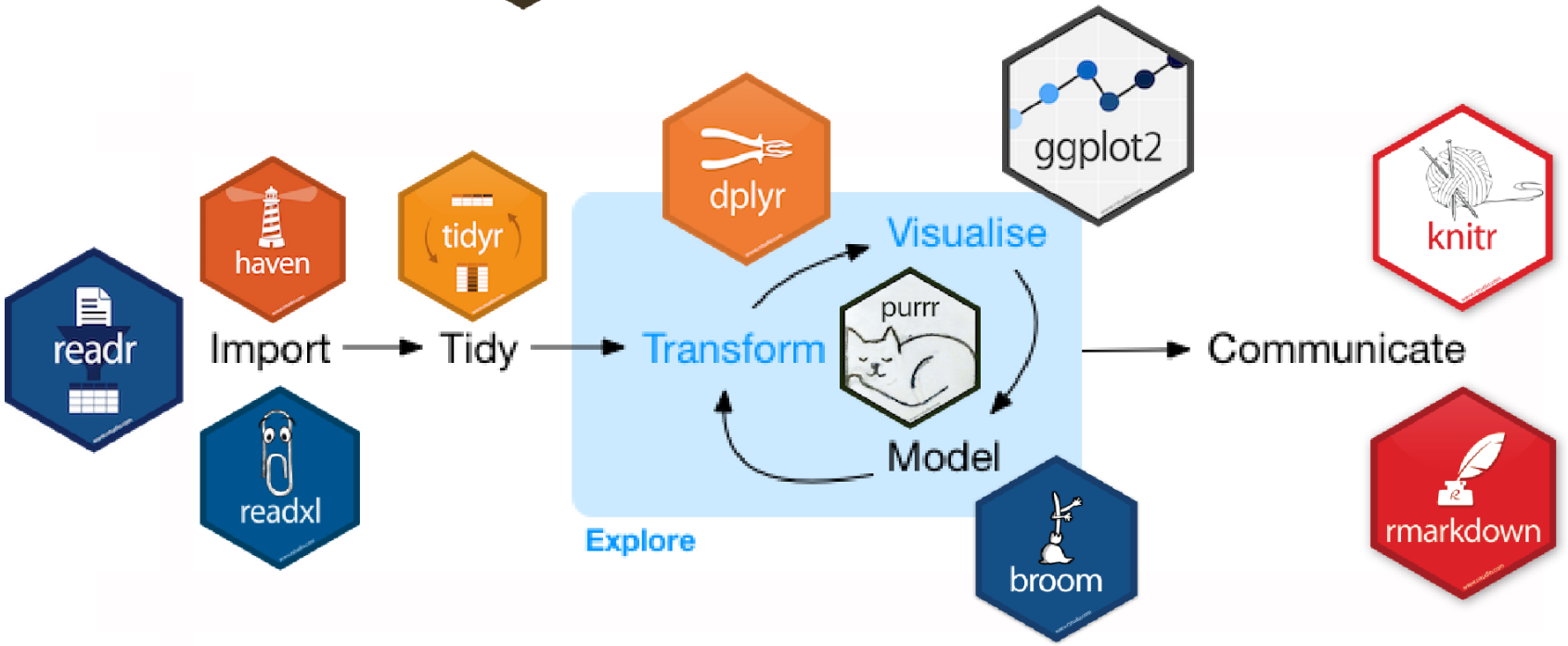
A collection of R packages designed for data science



data.frames

factors

strings

source

Base R

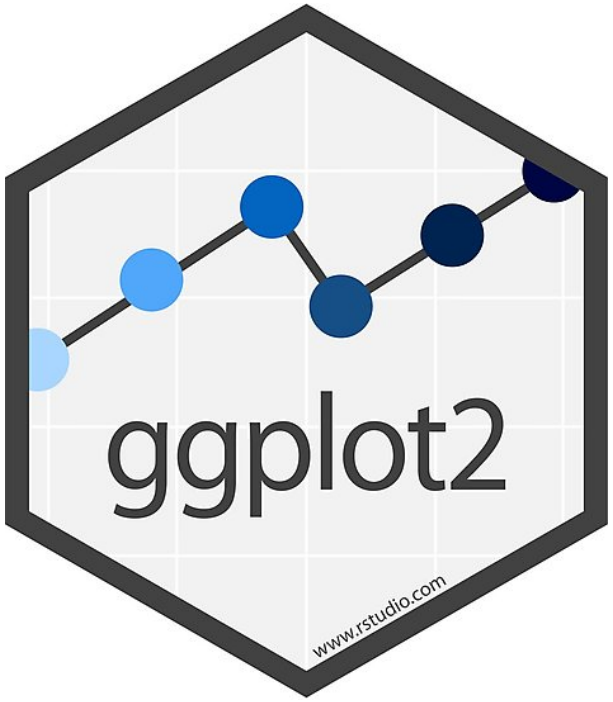
```
data[ , "country"]
```

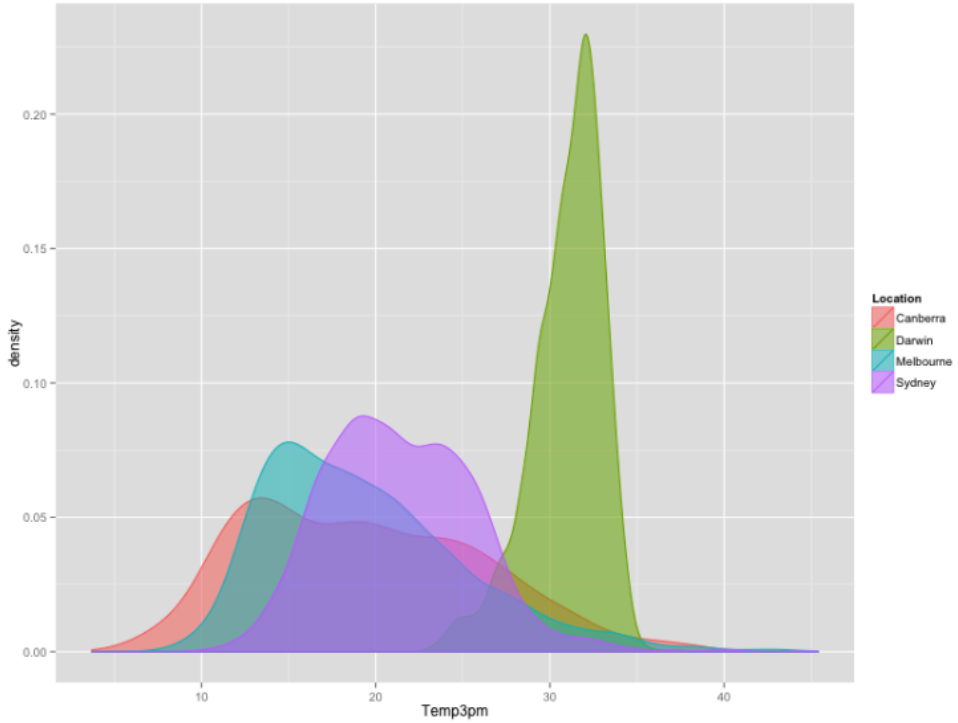

```
data %>%
  select(country)
```

Base R

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

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





- Creator: Hadley Whickam
- Based on the **G**rammar of **G**raphic

```
library(ggplot2)
```

```
ggplot()
```

Data

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

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

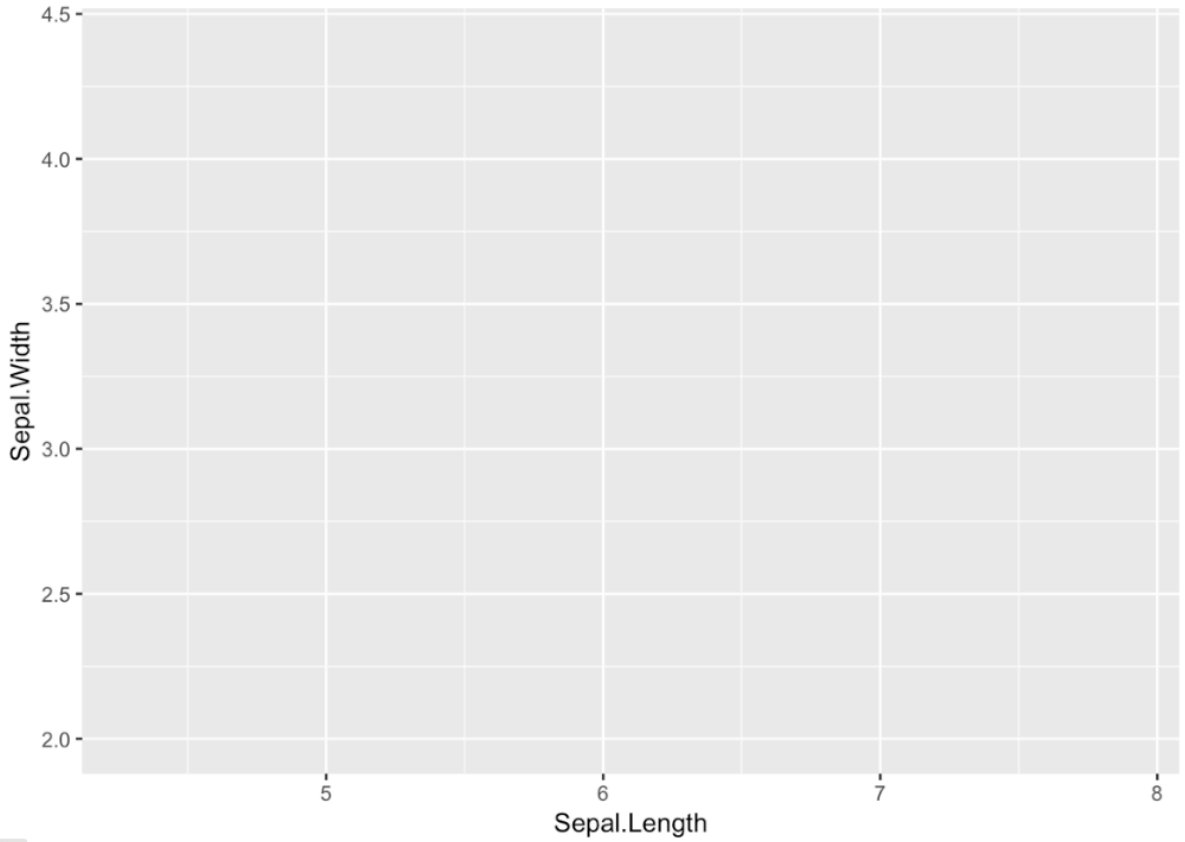
Data

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

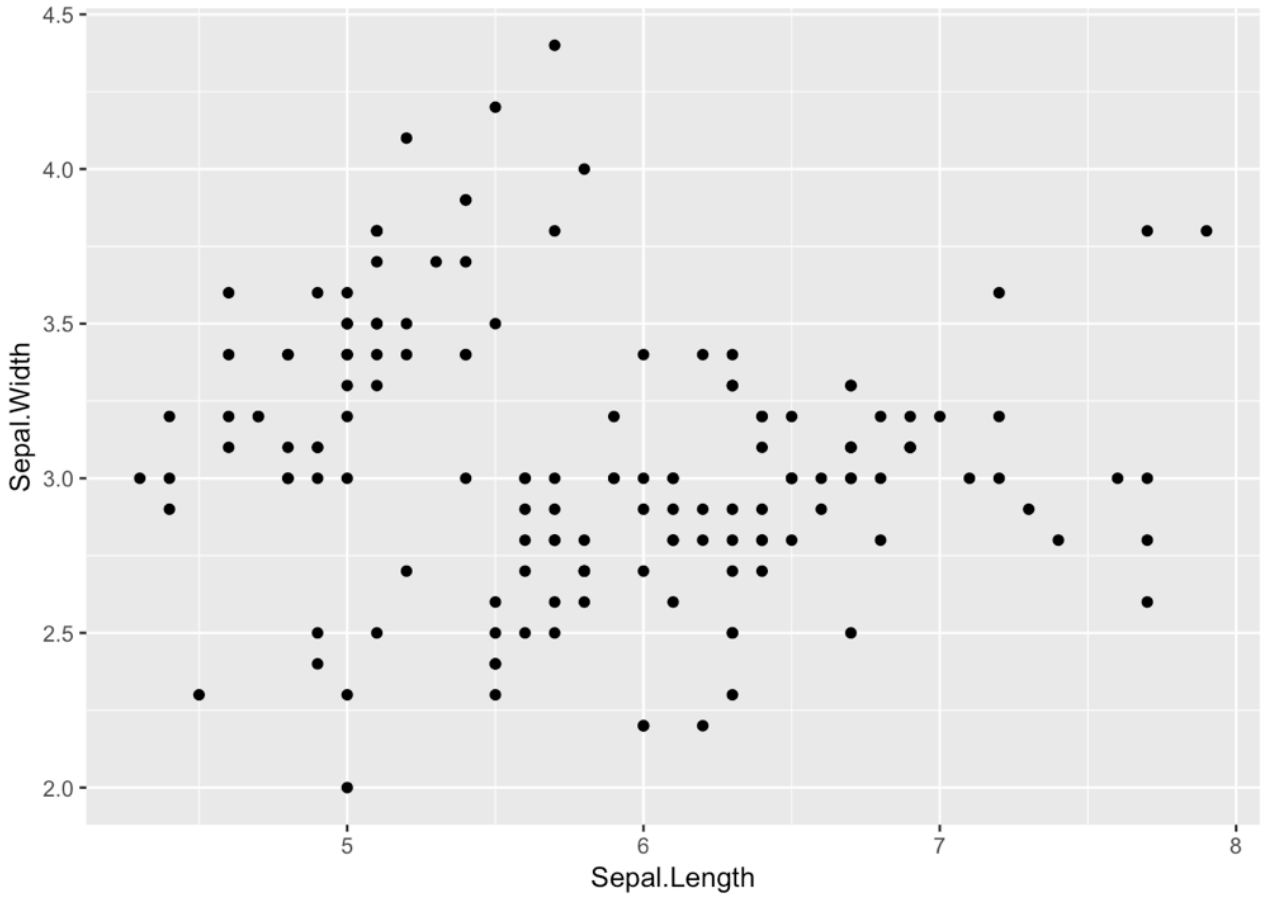
Sepal.Length	Sepal.Width
5.1	3.5
4.9	3.0
4.7	3.2



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

Data

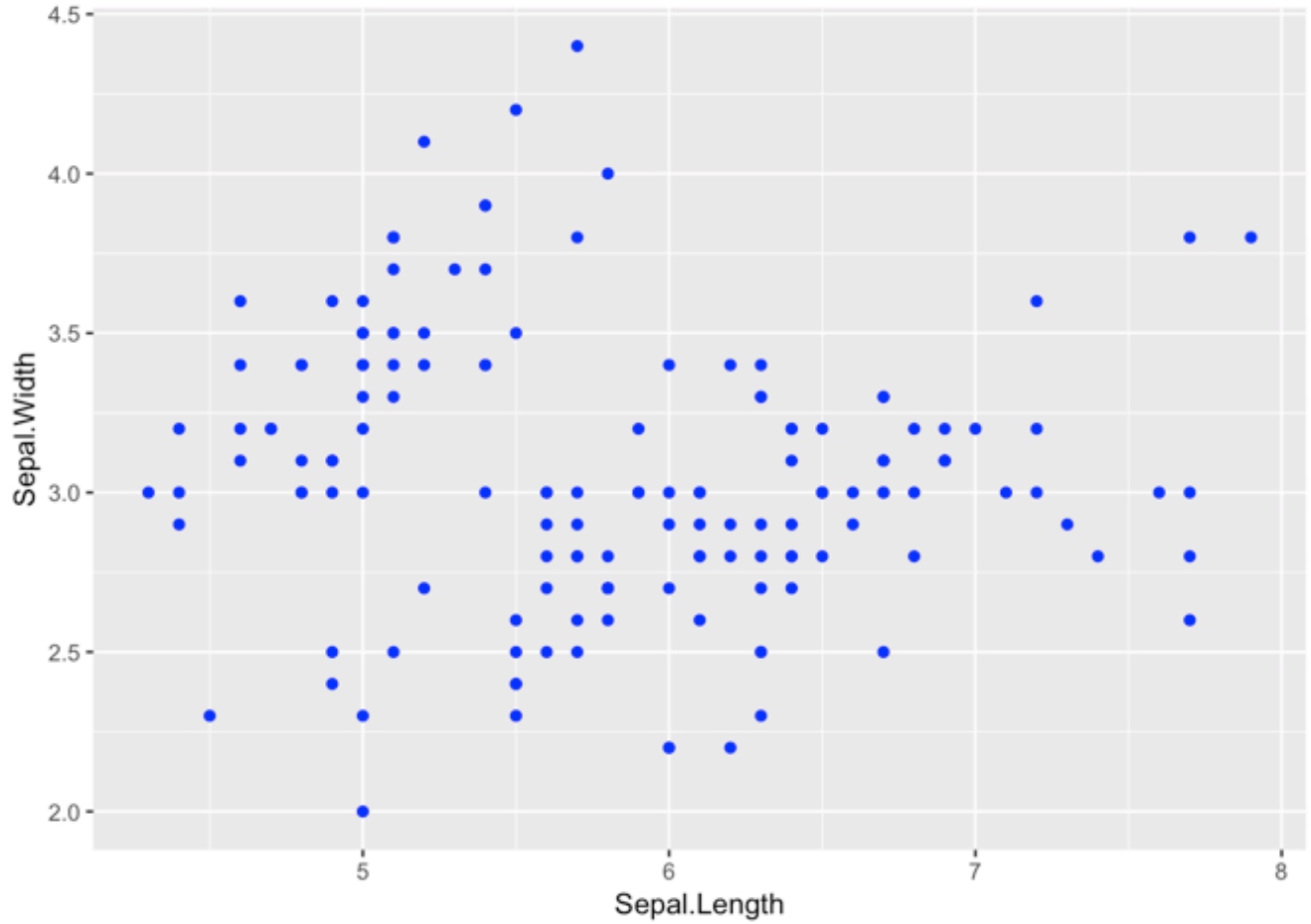
Sepal.Length	Sepal.Width
5.1	3.5
4.9	3.0
4.7	3.2



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

Data

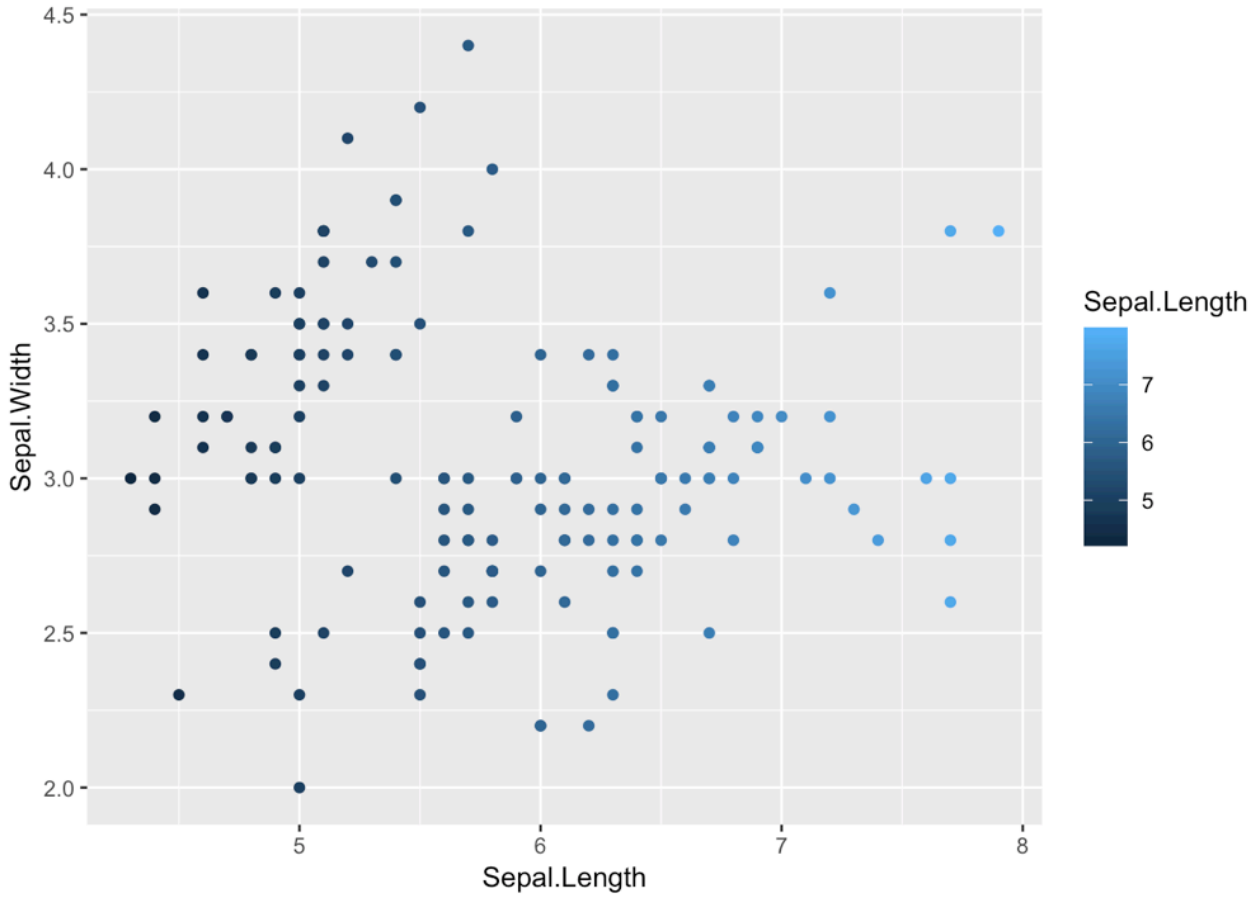
Sepal.Length	Sepal.Width
5.1	3.5
4.9	3.0
4.7	3.2



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

Data

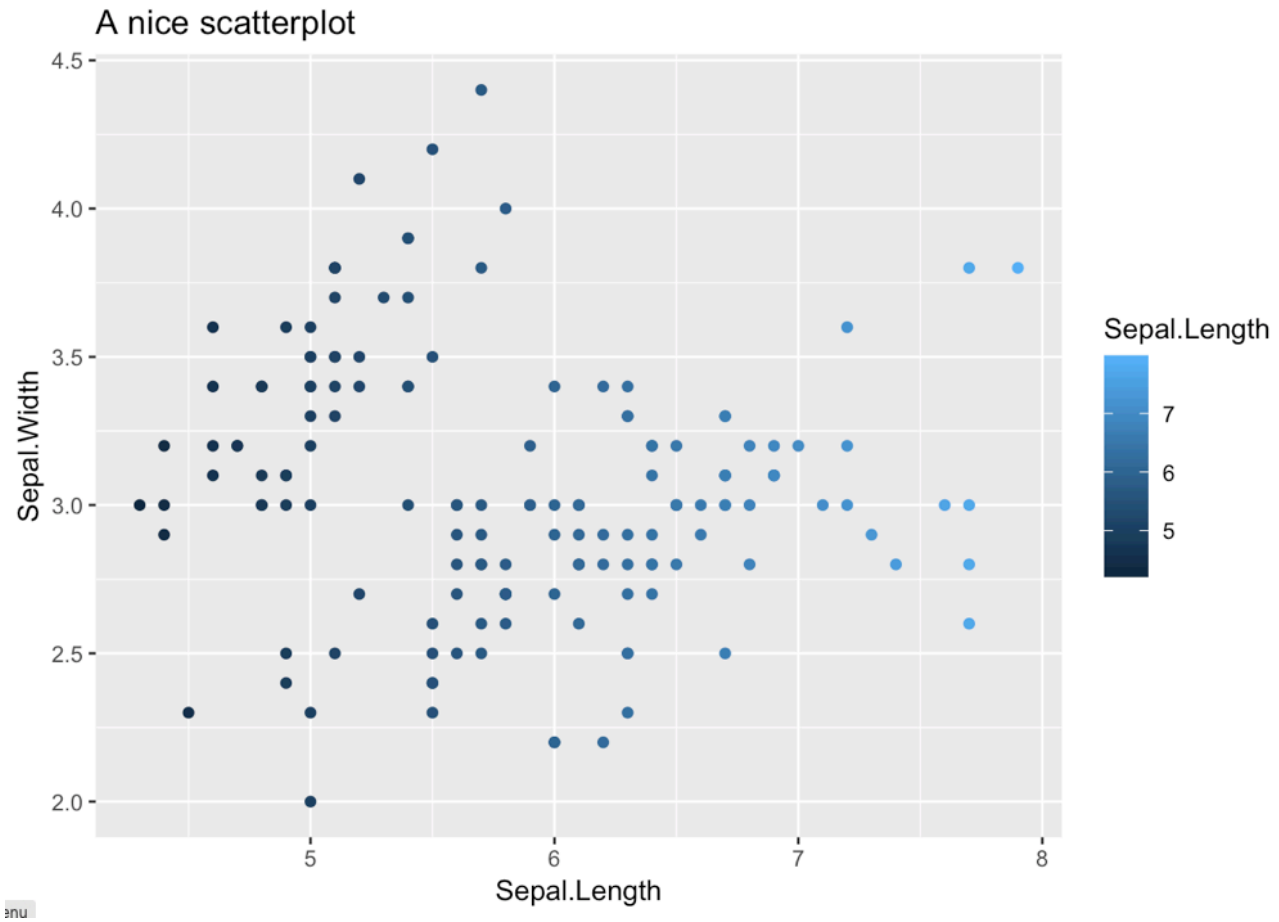
Sepal.Length	Sepal.Width
5.1	3.5
4.9	3.0
4.7	3.2



```
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



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Useful link

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