

20250620\_01

June 20, 2025

```
[7]: # Load built-in dataset  
data(mtcars)
```

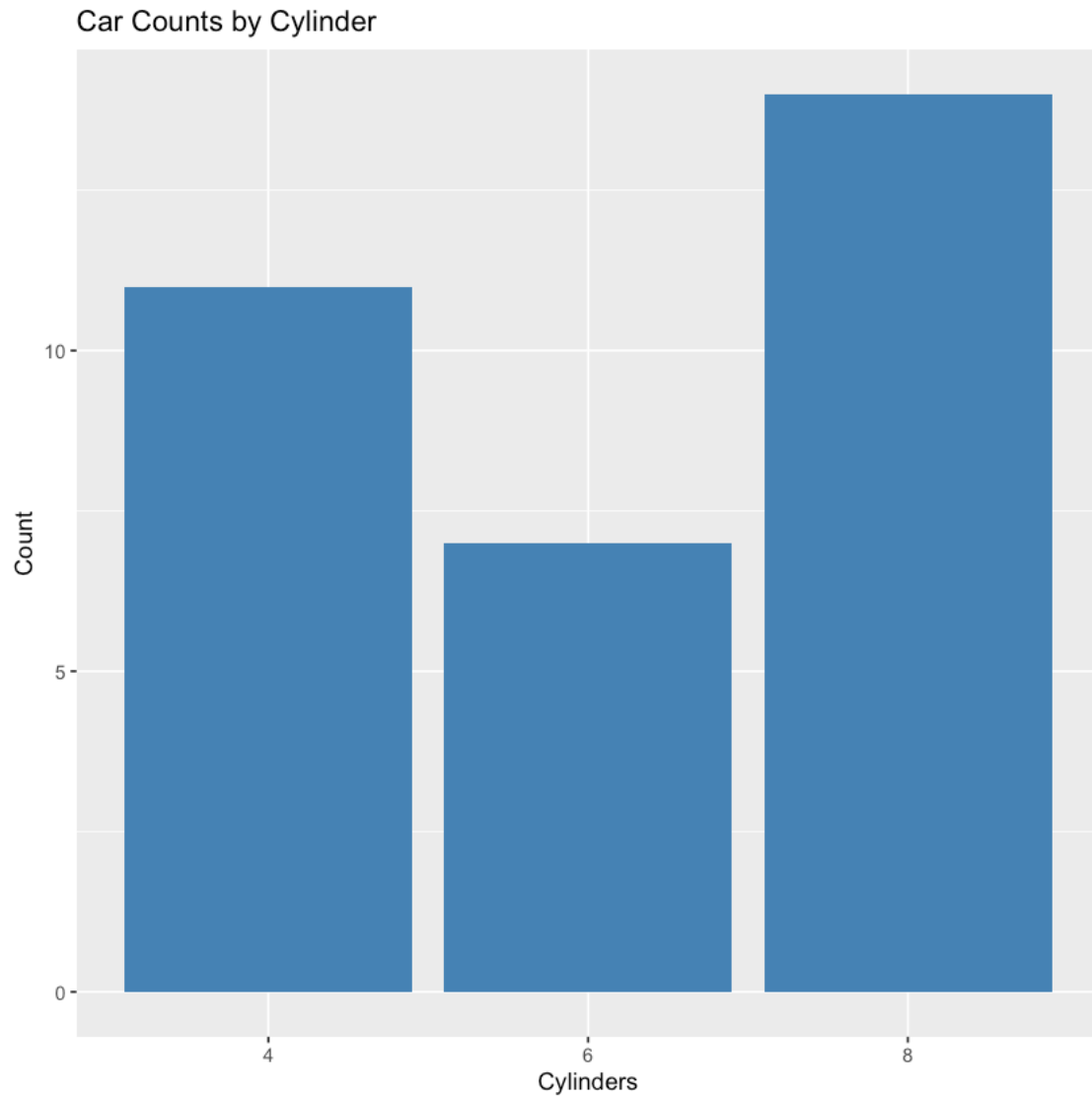
```
[6]: # Check how the dataset look like  
head(mtcars)
```

A data.frame: 6 × 11

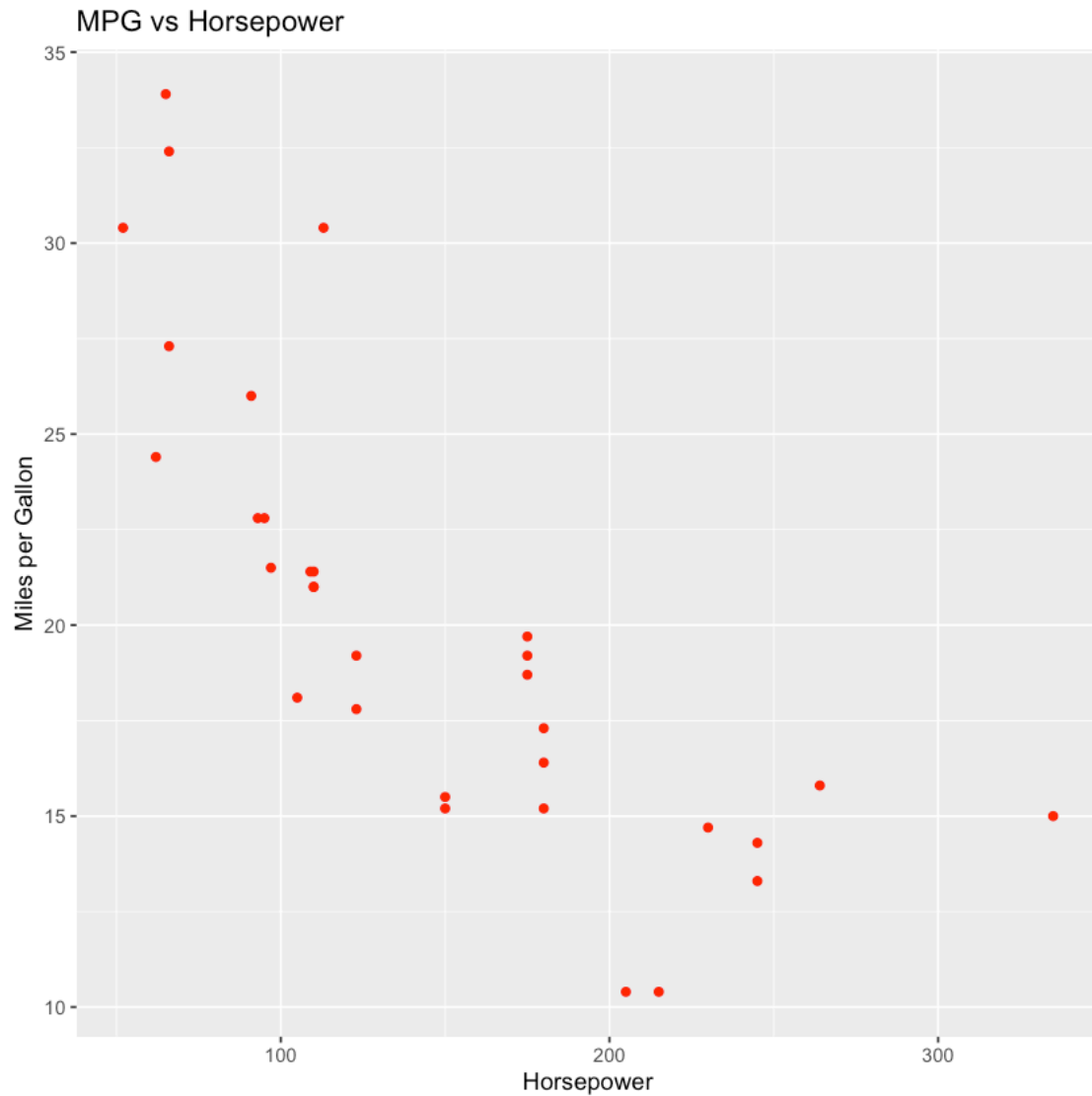
	mpg	cyl	disp	hp	drat	wt	qsec	vs
	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>
Mazda RX4	21.0	6	160	110	3.90	2.620	16.46	0
Mazda RX4 Wag	21.0	6	160	110	3.90	2.875	17.02	0
Datsun 710	22.8	4	108	93	3.85	2.320	18.61	1
Hornet 4 Drive	21.4	6	258	110	3.08	3.215	19.44	1
Hornet Sportabout	18.7	8	360	175	3.15	3.440	17.02	0
Valiant	18.1	6	225	105	2.76	3.460	20.22	1

```
[8]: # Load what we are going to use  
library(ggplot2)
```

```
[17]: # aes stands for aesthetic, it manages what components the graph should use  
# factor is used to tell R to treat the variable as categorical  
# geom stands for geometric  
# labs is abbreviation for label  
ggplot(mtcars, aes(x = factor(cyl))) +  
geom_bar(fill = "steelblue") +  
labs(title = "Car Counts by Cylinder", x = "Cylinders", y = "Count")
```

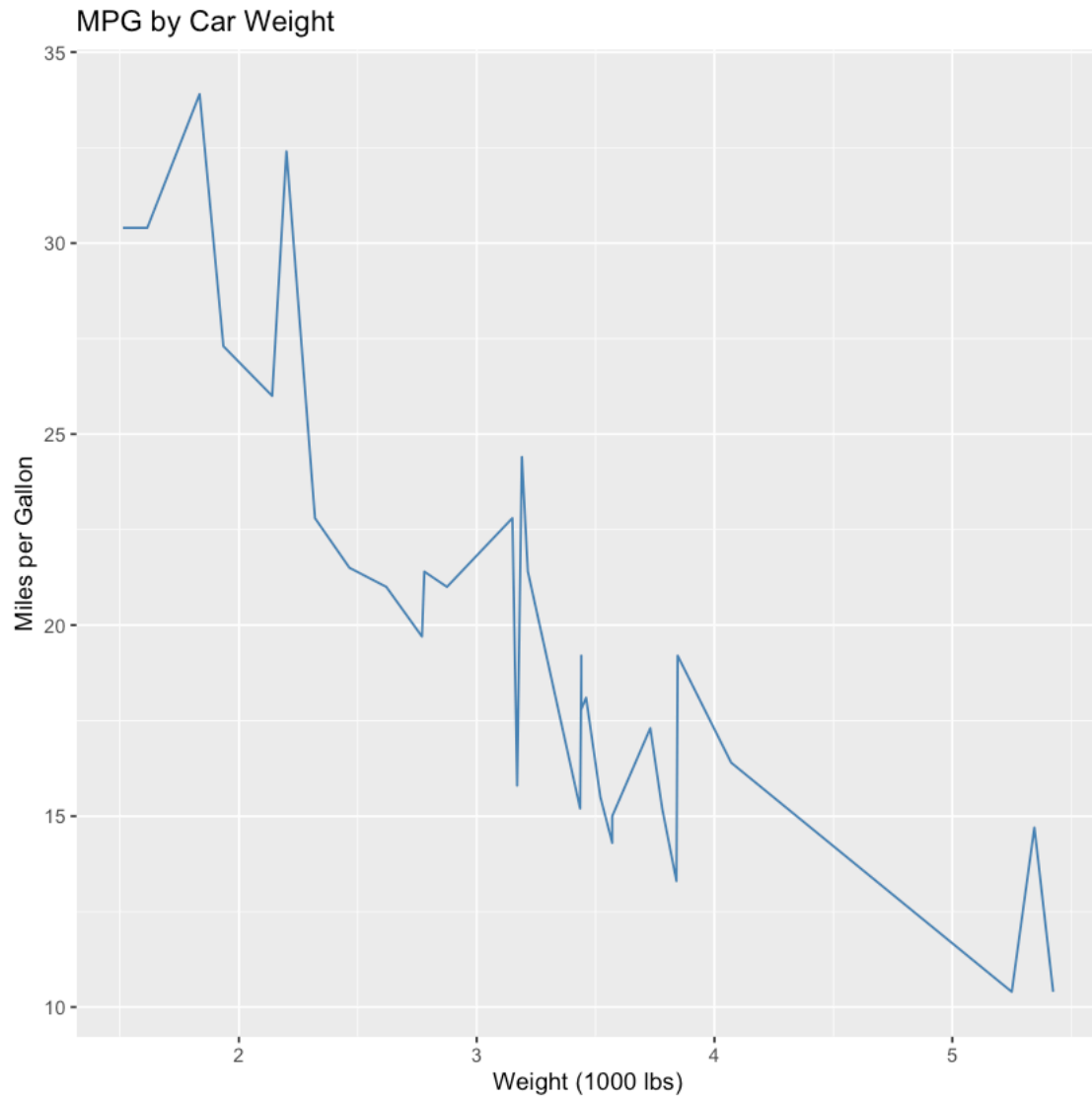


```
[19]: ggplot(mtcars, aes(x = hp, y = mpg)) +  
      geom_point(color = "red") +  
      labs(title = "MPG vs Horsepower", x = "Horsepower", y = "Miles per Gallon")
```



```
[23]: # Sort mtcars by weight
mtcars_sorted = mtcars[order(mtcars[["wt"]]), ]

ggplot(mtcars_sorted, aes(x = wt, y = mpg)) +
  geom_line(color = "steelblue") +
  labs(title = "MPG by Car Weight", x = "Weight (1000 lbs)", y = "Miles per
    ↪Gallon")
```



```
[25]: # ~ means by
ggplot(mtcars, aes(x = hp, y = mpg)) +
  geom_point() +
  facet_wrap(~ cyl) +
  labs(title = "MPG vs Horsepower by Cylinder Count")
```

MPG vs Horsepower by Cylinder Count

