

Bar Charts in ggplot With Multiple Outcomes

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1 Setup

```
library(ggplot2) # beautiful graphs
```

```
library(tidyr) # tidy data
```

2 Simulated Data

```
x <- c(1,2,3) # independent variable
```

```
y <- c(4,5,6) # first outcome
```

```
z <- c(7,8,9) # second outcome
```

```
mydata <- data.frame(x,y,z)
```

```
mydata # replay mydata
```

```
##   x y z
## 1 1 4 7
## 2 2 5 8
## 3 3 6 9
```

3 Reshape Data With Gather

```
myReshapedData <- gather(mydata, # dataframe
                          key, # name of column for key
                          value, # name of column for value
                          2:3) # columns to gather
```

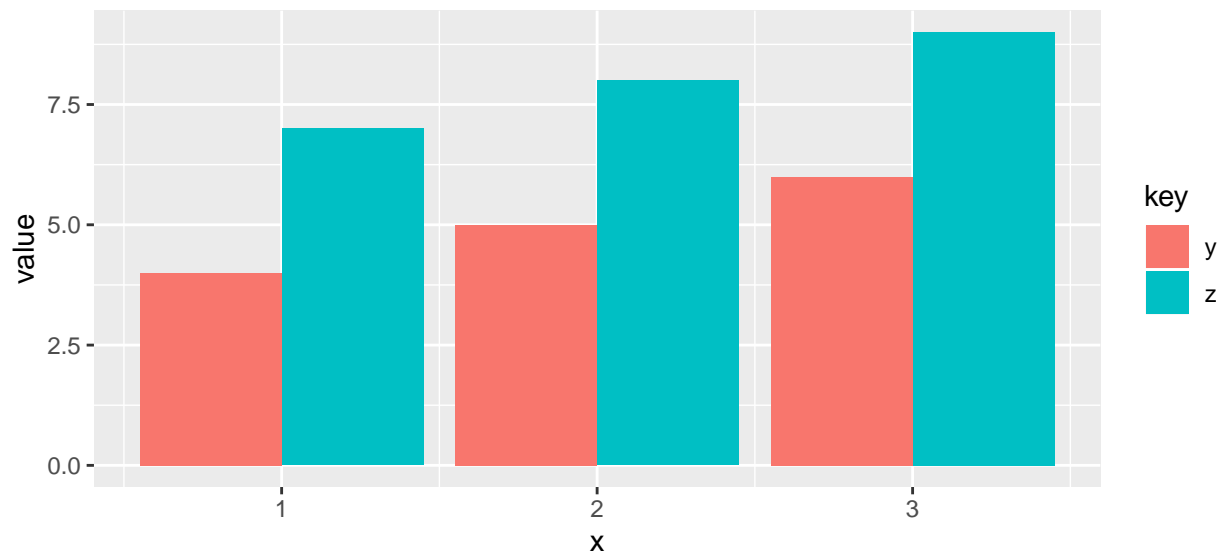
```
myReshapedData # replay myReshapedData
```

```
##   x key value
## 1 1  y     4
## 2 2  y     5
## 3 3  y     6
## 4 1  z     7
## 5 2  z     8
## 6 3  z     9
```

4 Graphs

4.1 Bar Chart With Unstacked Bars

```
ggplot(myReshapedData, # data I am using
  aes(x = x, # x is x
    y = value, # y is value
    fill = key)) + # fill is key
  geom_bar(stat = "identity", # stat is 'identity'
    position = position_dodge()) # unstack bars
```



4.2 Line Chart

```
ggplot(myReshapedData, # data I am using
  aes(x = x, # x is x
    y = value, # y is value
    color = key, # color is key
    group = key)) + # line needs a group aesthetic
  geom_line()
```

