

ggplot

17F 8333

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```
library(datasets)
library(ggplot2)
df=datasets::mtcars

str(df)

## 'data.frame': 32 obs. of 11 variables:
## $ mpg : num 21 21 22.8 21.4 18.7 18.1 14.3 24.4 22.8 19.2 ...
## $ cyl : num 6 6 4 6 8 6 8 4 4 6 ...
## $ disp: num 160 160 108 258 360 ...
## $ hp : num 110 110 93 110 175 105 245 62 95 123 ...
## $ drat: num 3.9 3.9 3.85 3.08 3.15 2.76 3.21 3.69 3.92 3.92 ...
## $ wt : num 2.62 2.88 2.32 3.21 3.44 ...
## $ qsec: num 16.5 17 18.6 19.4 17 ...
## $ vs : num 0 0 1 1 0 1 0 1 1 1 ...
## $ am : num 1 1 1 0 0 0 0 0 0 0 ...
## $ gear: num 4 4 4 3 3 3 3 4 4 4 ...
## $ carb: num 4 4 1 1 2 1 4 2 2 4 ...

df

##           mpg  cyl  disp  hp drat   wt  qsec vs am gear carb
## Mazda RX4      21.0    6 160.0 110 3.90 2.620 16.46 0 1    4    4
## Mazda RX4 Wag  21.0    6 160.0 110 3.90 2.875 17.02 0 1    4    4
## Datsun 710     22.8    4 108.0  93 3.85 2.320 18.61 1 1    4    1
## Hornet 4 Drive  21.4    6 258.0 110 3.08 3.215 19.44 1 0    3    1
## Hornet Sportabout 18.7    8 360.0 175 3.15 3.440 17.02 0 0    3    2
## Valiant        18.1    6 225.0 105 2.76 3.460 20.22 1 0    3    1
## Duster 360     14.3    8 360.0 245 3.21 3.570 15.84 0 0    3    4
## Merc 240D      24.4    4 146.7  62 3.69 3.190 20.00 1 0    4    2
## Merc 230       22.8    4 140.8  95 3.92 3.150 22.90 1 0    4    2
## Merc 280       19.2    6 167.6 123 3.92 3.440 18.30 1 0    4    4
## Merc 280C      17.8    6 167.6 123 3.92 3.440 18.90 1 0    4    4
## Merc 450SE     16.4    8 275.8 180 3.07 4.070 17.40 0 0    3    3
## Merc 450SL     17.3    8 275.8 180 3.07 3.730 17.60 0 0    3    3
## Merc 450SLC    15.2    8 275.8 180 3.07 3.780 18.00 0 0    3    3
## Cadillac Fleetwood 10.4    8 472.0 205 2.93 5.250 17.98 0 0    3    4
## Lincoln Continental 10.4    8 460.0 215 3.00 5.424 17.82 0 0    3    4
## Chrysler Imperial 14.7    8 440.0 230 3.23 5.345 17.42 0 0    3    4
## Fiat 128       32.4    4  78.7  66 4.08 2.200 19.47 1 1    4    1
## Honda Civic    30.4    4  75.7  52 4.93 1.615 18.52 1 1    4    2
## Toyota Corolla 33.9    4  71.1  65 4.22 1.835 19.90 1 1    4    1
```

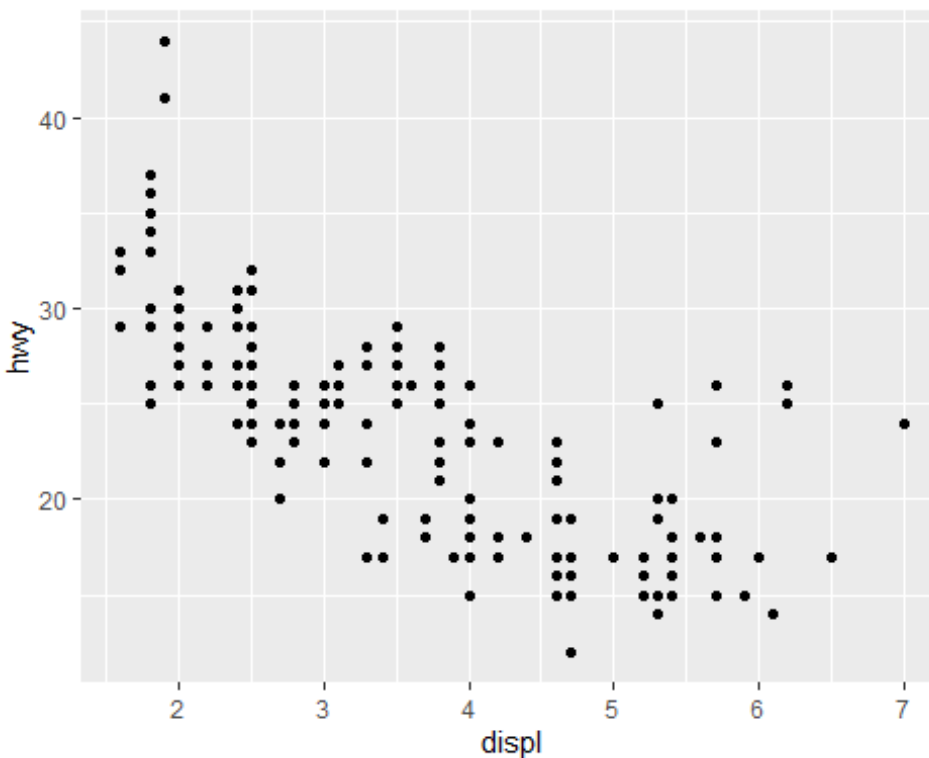
## Toyota Corona	21.5	4	120.1	97	3.70	2.465	20.01	1	0	3	1
## Dodge Challenger	15.5	8	318.0	150	2.76	3.520	16.87	0	0	3	2
## AMC Javelin	15.2	8	304.0	150	3.15	3.435	17.30	0	0	3	2
## Camaro Z28	13.3	8	350.0	245	3.73	3.840	15.41	0	0	3	4
## Pontiac Firebird	19.2	8	400.0	175	3.08	3.845	17.05	0	0	3	2
## Fiat X1-9	27.3	4	79.0	66	4.08	1.935	18.90	1	1	4	1
## Porsche 914-2	26.0	4	120.3	91	4.43	2.140	16.70	0	1	5	2
## Lotus Europa	30.4	4	95.1	113	3.77	1.513	16.90	1	1	5	2
## Ford Pantera L	15.8	8	351.0	264	4.22	3.170	14.50	0	1	5	4
## Ferrari Dino	19.7	6	145.0	175	3.62	2.770	15.50	0	1	5	6
## Maserati Bora	15.0	8	301.0	335	3.54	3.570	14.60	0	1	5	8
## Volvo 142E	21.4	4	121.0	109	4.11	2.780	18.60	1	1	4	2

R Markdown

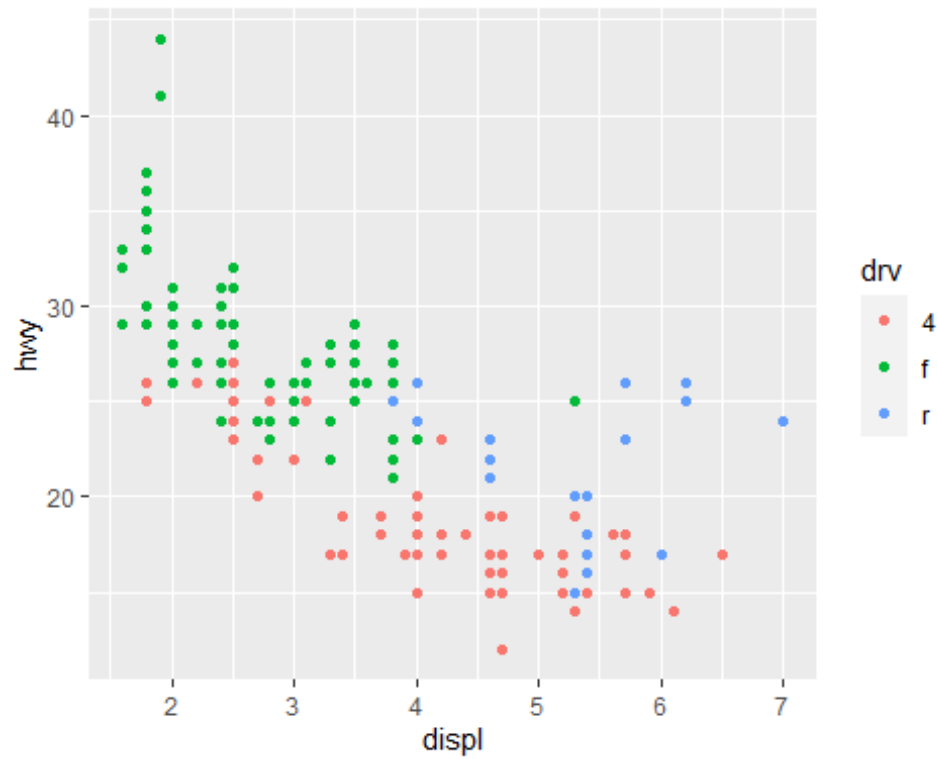
This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

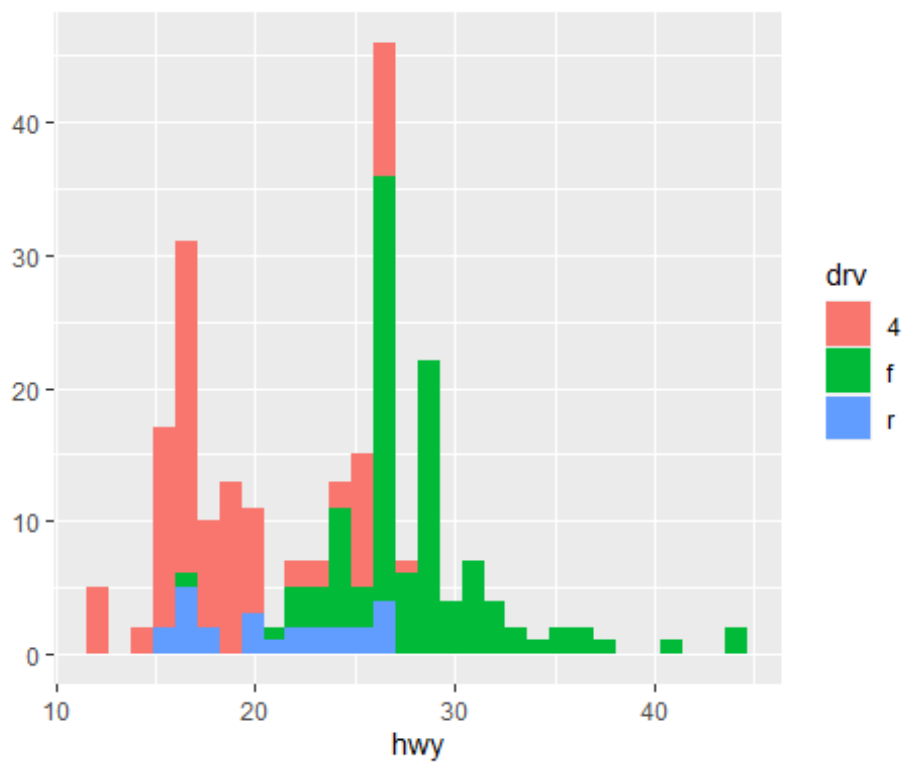
```
qplot(displ,hwy,data=mpg)
```



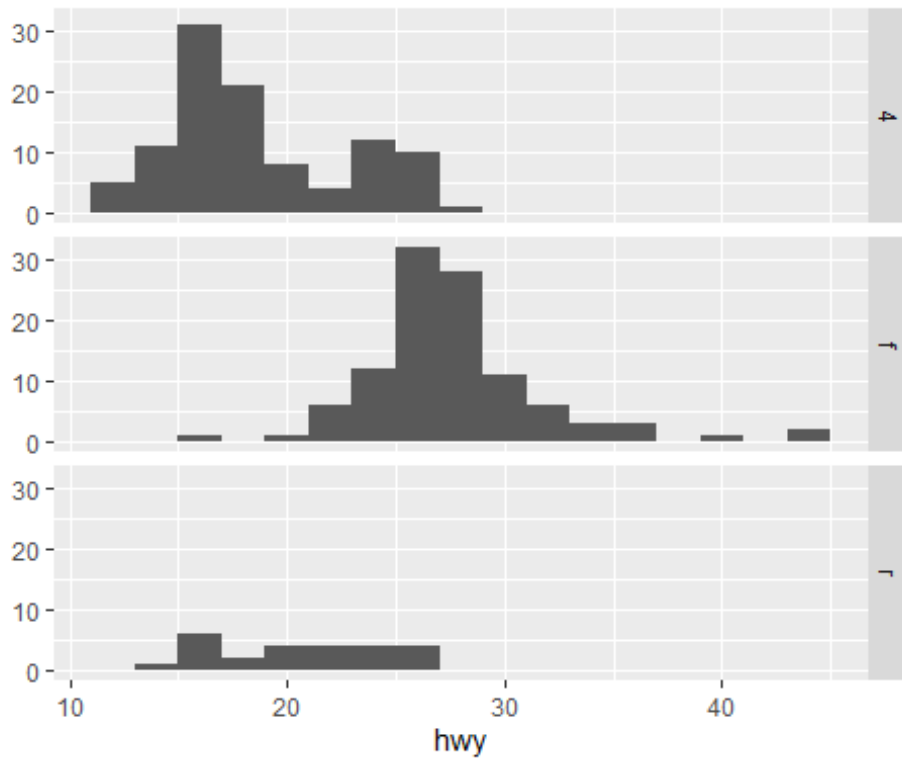
```
qplot(displ, hwy, data = mpg, color = drv)
```



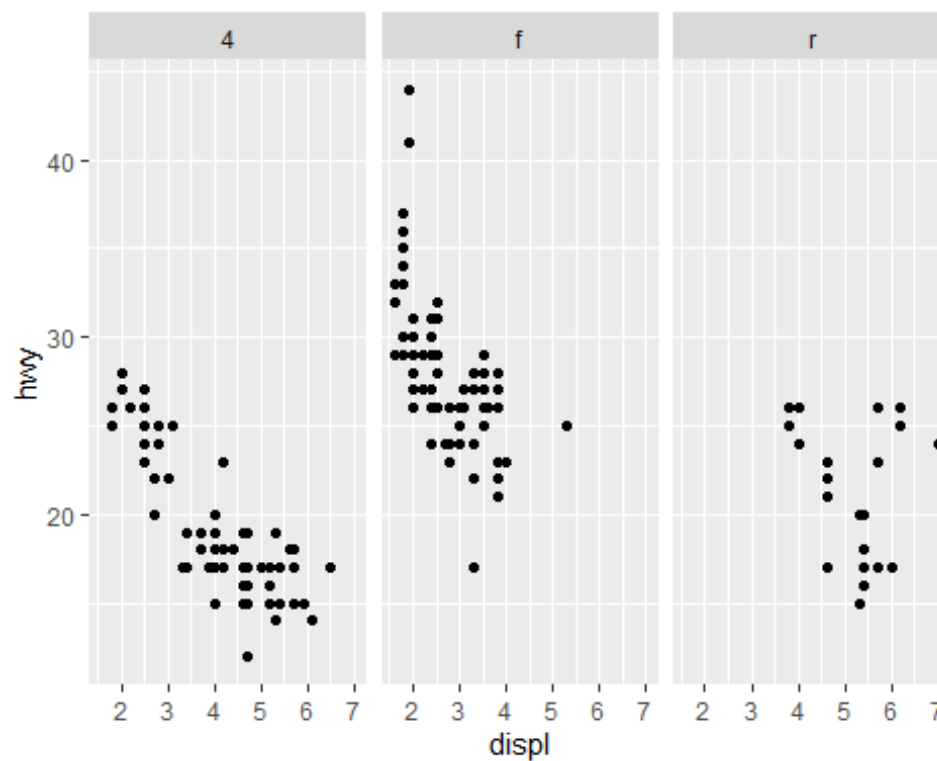
```
qplot(hwy, data = mpg, fill = drv)
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```



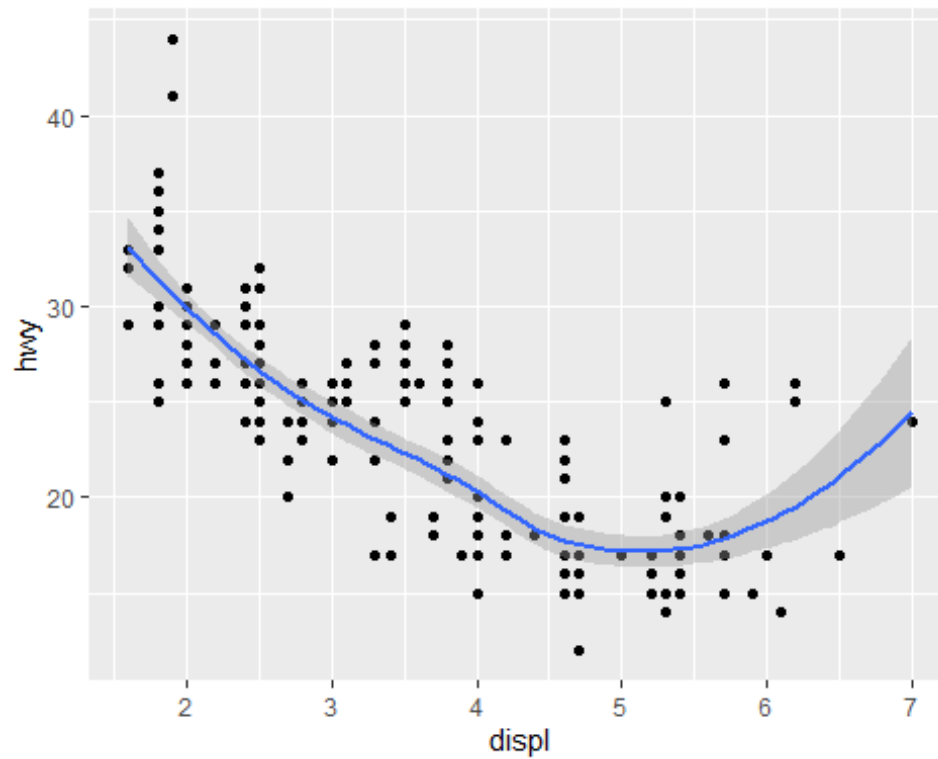
```
qplot(hwy, data = mpg, facets = drv ~ ., binwidth = 2)
```



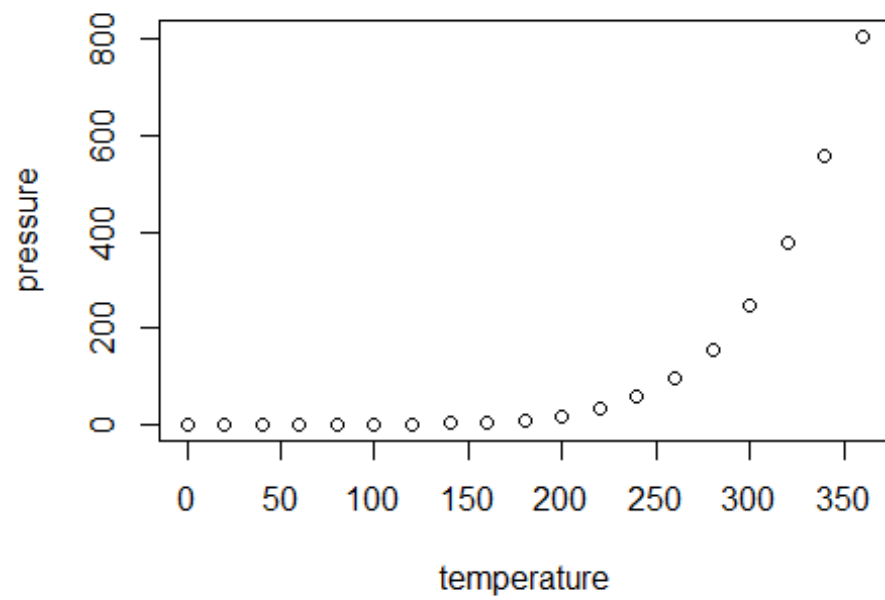
```
qplot(displ, hwy, data = mpg, facets = . ~ drv)
```



```
qplot(displ, hwy, data = mpg, geom = c("point",  
"smooth"))  
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



You can also embed plots, for example:



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.