practica1

2022-07-07

```
mtcars[order(mtcars$gear,mtcars$mpg),]
                        mpg cyl disp hp drat
                                                       qsec vs am gear carb
                                                   wt
## Cadillac Fleetwood
                       10.4
                              8 472.0 205 2.93 5.250 17.98
## Lincoln Continental 10.4
                              8 460.0 215 3.00 5.424 17.82
## Camaro Z28
                       13.3
                              8 350.0 245 3.73 3.840 15.41
                                                                           4
## Duster 360
                              8 360.0 245 3.21 3.570 15.84
                       14.3
## Chrysler Imperial
                       14.7
                              8 440.0 230 3.23 5.345 17.42
## Merc 450SLC
                       15.2
                              8 275.8 180 3.07 3.780 18.00
                                                                           3
## AMC Javelin
                       15.2
                              8 304.0 150 3.15 3.435 17.30
                                                                           2
## Dodge Challenger
                       15.5
                              8 318.0 150 2.76 3.520 16.87
## Merc 450SE
                       16.4
                              8 275.8 180 3.07 4.070 17.40
                                                                           3
## Merc 450SL
                       17.3
                              8 275.8 180 3.07 3.730 17.60
                                                                           3
## Valiant
                       18.1
                              6 225.0 105 2.76 3.460 20.22
                                                                           1
## Hornet Sportabout
                       18.7
                              8 360.0 175 3.15 3.440 17.02
                              8 400.0 175 3.08 3.845 17.05
                                                                      3
## Pontiac Firebird
                       19.2
## Hornet 4 Drive
                       21.4
                              6 258.0 110 3.08 3.215 19.44
                                                                      3
                                                                           1
## Toyota Corona
                       21.5
                              4 120.1 97 3.70 2.465 20.01
## Merc 280C
                       17.8
                              6 167.6 123 3.92 3.440 18.90
                                                                           4
## Merc 280
                       19.2
                              6 167.6 123 3.92 3.440 18.30
                                                                      4
## Mazda RX4
                       21.0
                              6 160.0 110 3.90 2.620 16.46
                                                                           4
## Mazda RX4 Wag
                       21.0
                              6 160.0 110 3.90 2.875 17.02
## Volvo 142E
                       21.4
                              4 121.0 109 4.11 2.780 18.60
## Datsun 710
                       22.8
                              4 108.0
                                        93 3.85 2.320 18.61
                                                                           1
## Merc 230
                       22.8
                              4 140.8
                                        95 3.92 3.150 22.90
                                                                           2
## Merc 240D
                       24.4
                              4 146.7
                                        62 3.69 3.190 20.00
                                                                           2
                       27.3
                                 79.0
## Fiat X1-9
                                        66 4.08 1.935 18.90
                                                                           1
## Honda Civic
                                 75.7
                                        52 4.93 1.615 18.52
                       30.4
## Fiat 128
                       32.4
                              4 78.7
                                        66 4.08 2.200 19.47
                                                                           1
## Toyota Corolla
                       33.9
                              4 71.1
                                        65 4.22 1.835 19.90
## Maserati Bora
                       15.0
                              8 301.0 335 3.54 3.570 14.60
                                                                      5
                                                                           8
## Ford Pantera L
                       15.8
                              8 351.0 264 4.22 3.170 14.50
                                                                      5
                                                                           4
                              6 145.0 175 3.62 2.770 15.50
                                                                      5
                                                                           6
## Ferrari Dino
                       19.7
## Porsche 914-2
                              4 120.3 91 4.43 2.140 16.70
                                                                      5
                                                                           2
                       26.0
## Lotus Europa
                       30.4
                              4 95.1 113 3.77 1.513 16.90
library(dplyr)
##
## Attaching package: 'dplyr'
## The following objects are masked from 'package:stats':
##
##
       filter, lag
## The following objects are masked from 'package:base':
##
```

arrange(.data=mtcars,mtcars\$gear,mtcars\$mpg)

```
##
                        mpg cyl disp hp drat
                                                   wt qsec vs am gear carb
## Cadillac Fleetwood 10.4
                               8 472.0 205 2.93 5.250 17.98
                                                              0
                                                                           4
## Lincoln Continental 10.4
                               8 460.0 215 3.00 5.424 17.82
                                                                 0
                                                                      3
                                                                           4
## Camaro Z28
                       13.3
                               8 350.0 245 3.73 3.840 15.41
                                                              0
                                                                 0
                                                                      3
                                                                           4
                               8 360.0 245 3.21 3.570 15.84
## Duster 360
                       14.3
## Chrysler Imperial
                               8 440.0 230 3.23 5.345 17.42
                       14.7
                                                              0
                                                                 0
                                                                           4
## Merc 450SLC
                       15.2
                               8 275.8 180 3.07 3.780 18.00
                                                                 0
                                                                      3
                                                                           3
## AMC Javelin
                       15.2
                               8 304.0 150 3.15 3.435 17.30
                                                              0
                                                                 Ω
                                                                      3
                                                                           2
## Dodge Challenger
                               8 318.0 150 2.76 3.520 16.87
                       15.5
## Merc 450SE
                               8 275.8 180 3.07 4.070 17.40
                                                                      3
                       16.4
                                                              0
                                                                 Ω
                                                                           3
## Merc 450SL
                       17.3
                               8 275.8 180 3.07 3.730 17.60
                                                              0
                                                                 0
                                                                      3
                                                                           3
## Valiant
                       18.1
                               6 225.0 105 2.76 3.460 20.22
                                                                 0
                                                                      3
                                                                           1
                                                              1
## Hornet Sportabout
                       18.7
                               8 360.0 175 3.15 3.440 17.02
## Pontiac Firebird
                       19.2
                               8 400.0 175 3.08 3.845 17.05
                                                              0
                                                                 0
                                                                      3
                                                                           2
## Hornet 4 Drive
                       21.4
                               6 258.0 110 3.08 3.215 19.44
                                                                           1
                                                                      3
## Toyota Corona
                       21.5
                               4 120.1 97 3.70 2.465 20.01
                                                                 0
                                                                           1
## Merc 280C
                       17.8
                               6 167.6 123 3.92 3.440 18.90
                                                              1
## Merc 280
                       19.2
                               6 167.6 123 3.92 3.440 18.30
                                                              1
                                                                 0
                                                                      4
## Mazda RX4
                       21.0
                               6 160.0 110 3.90 2.620 16.46
                                                              0
## Mazda RX4 Wag
                       21.0
                               6 160.0 110 3.90 2.875 17.02
## Volvo 142E
                       21.4
                               4 121.0 109 4.11 2.780 18.60
                                                                           2
## Datsun 710
                       22.8
                               4 108.0 93 3.85 2.320 18.61
                                                                      4
                                                                           1
## Merc 230
                       22.8
                              4 140.8 95 3.92 3.150 22.90
                                                                      4
                                                                           2
                                                                 0
## Merc 240D
                       24.4
                               4 146.7
                                        62 3.69 3.190 20.00
## Fiat X1-9
                       27.3
                               4 79.0
                                        66 4.08 1.935 18.90
                                                              1
                                                                 1
                                                                      4
                                                                           1
## Honda Civic
                       30.4
                               4
                                 75.7
                                        52 4.93 1.615 18.52
                                                                      4
## Fiat 128
                       32.4
                               4 78.7
                                        66 4.08 2.200 19.47
                                                                      4
                                                              1
                                                                 1
                                                                           1
## Toyota Corolla
                       33.9
                                        65 4.22 1.835 19.90
                               4 71.1
## Maserati Bora
                       15.0
                               8 301.0 335 3.54 3.570 14.60
                                                                      5
                                                                           8
                                                                1
## Ford Pantera L
                       15.8
                              8 351.0 264 4.22 3.170 14.50
                                                                      5
                                                                           4
## Ferrari Dino
                       19.7
                               6 145.0 175 3.62 2.770 15.50
                                                              0
                                                                      5
                                                                           6
                                                                1
## Porsche 914-2
                       26.0
                               4 120.3 91 4.43 2.140 16.70
                                                                           2
                               4 95.1 113 3.77 1.513 16.90 1 1
## Lotus Europa
                       30.4
                                                                      5
small_mtcars <-</pre>
mtcars %>%
arrange(gear) %>%
slice(1:10)
small_mtcars
```

```
##
                        mpg cyl disp hp drat
                                                   wt qsec vs am gear carb
## Hornet 4 Drive
                       21.4
                              6 258.0 110 3.08 3.215 19.44
                              8 360.0 175 3.15 3.440 17.02
                                                                           2
## Hornet Sportabout
                       18.7
## Valiant
                       18.1
                              6 225.0 105 2.76 3.460 20.22
                                                                           1
                                                             1
                              8 360.0 245 3.21 3.570 15.84
## Duster 360
                       14.3
                                                                           4
## Merc 450SE
                                                                     3
                       16.4
                              8 275.8 180 3.07 4.070 17.40
                                                             0
                                                                0
                                                                           3
## Merc 450SL
                       17.3
                              8 275.8 180 3.07 3.730 17.60
                                                             0
## Merc 450SLC
                       15.2
                              8 275.8 180 3.07 3.780 18.00
                                                                     3
                                                             0
                                                                0
                                                                           3
## Cadillac Fleetwood 10.4
                              8 472.0 205 2.93 5.250 17.98
                                                             0
                                                                     3
                                                                           4
## Lincoln Continental 10.4
                              8 460.0 215 3.00 5.424 17.82
                                                                     3
                                                                           4
                       14.7
## Chrysler Imperial
                              8 440.0 230 3.23 5.345 17.42
```

```
library(ggplot2)
ggplot(mtcars, aes(x = wt, y = mpg)) +
geom_point() +
geom_smooth(method = lm)
```

$geom_smooth()$ using formula 'y ~ x'

