

Data Manipulation

Data Sorting, Finding and Removing Duplicate Records

Mtcars Dataset

- Full form of mtcars is Motor Trend Car Road Tests
- The data was extracted from the 1974 *Motor Trend* US magazine
- comprises fuel consumption and 10 other aspects of automobile design and performance for 32 automobiles (1973–74 models)

Description of mtcars

A data frame with 32 observations on 11 (numeric) variables.

- [, 1] mpg Miles/(US) gallon
- [, 2] cyl Number of cylinders
- [, 3] disp Displacement (cu.in.)
- [, 4] hp Gross horsepower
- [, 5] drat Rear axle ratio

Description of mtcars

- [, 6] wt Weight (1000 lbs)
- [, 7] qsec 1/4 mile time
- [, 8] vs Engine (0 = V-shaped, 1 = straight)
- [, 9] am Transmission (0 = automatic, 1 = manual)
- [,10] gear Number of forward gears
- [,11] carb Number of carburetors

Sorting Data

sorting examples using the mtcars dataset

- `attach(mtcars)`

sort by mpg

- `newdata <- mtcars[order(mpg),]`

Sorting Data

```
# sort by mpg and cyl
```

```
newdata <- mtcars[order(mpg, cyl),]
```

```
#sort by mpg (ascending) and cyl (descending)
```

```
newdata <- mtcars[order(mpg, -cyl),]
```

```
detach(mtcars)
```