R Language 기초

1. 도움말 기능

1.1 도움말
edit(iris)
? iris
help(iris)

1.2 검색기능
??iris
help.search('iris')

1.3 패키지 도움말
library(help="datasets")

1.4 함수 도움말
method(as) _ 형변환 함수들
as.integer(1.25) : [1] 1
z <- pi * c(-1:1, 10)
[1] -3.141593 0.0000 3.141593 31.415927
as.integer(z)
[1] -3 0 3 31
data <- c(10, 20, 30)
mean(data) # data벡터에 속한 원소들의 평균
example(mean)

1.5 주석
주석
자동완성 : Tab
R.version

1.6 정보
iris
edit(iris)
attribute(iris)

```
> attributes(iris)
$names
[1] "Sepal.Length" "Sepal.Width"  "Petal.Length" "Petal.Width"  "Species"

$class
[1] "data.frame"

$row.names
  [1]   1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24
 [25]  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48
 [49]  49  50  51  52  53  54  55  56  57  58  59  60  61  62  63  64  65  66  67  68  69  70  71  72
 [73]  73  74  75  76  77  78  79  80  81  82  83  84  85  86  87  88  89  90  91  92  93  94  95  96
 [97]  97  98  99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120
[121] 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144
[145] 145 146 147 148 149 150
```

```
> example(mean)

mean> x <- c(0:10, 50)

mean> xm <- mean(x)

mean> c(xm, mean(x, trim = 0.10))
[1] 8.75 5.50
```

Trimmed means

Trimmed means are robust estimators of central tendency. To compute a trimmed mean, we remove a predetermined amount of observations on each side of a distribution, and average the remaining observations.

https://garstats.wordpress.com/2017/11/28/trimmed-means/

Here is how we compute a 20% trimmed mean. Let's consider a sample of 20 observations:
39 92 75 61 45 87 59 51 87 12 8 93 74 16 32 39 87 12 47 50
First we sort them:
8 12 12 16 32 39 39 45 47 50 51 59 61 74 75 87 87 87 92 93
The number of observations to remove is floor(0.2 * 20) = 4. So we trim 4 observations from each end:
(8 12 12 16) 32 39 39 45 47 50 51 59 61 74 75 87 (87 87 92 93)
And we take the mean of the remaining observations, such that our 20% trimmed mean = mean(c(32,39,39,45,47,50,51,59,61,74,75,87)) = 54.92