

Import from Web Storage – Logistic Regression

```
mydata<- read.csv("https://stats.idre.ucla.edu/stat/data/binary.csv")
//mydata$rank<-factor(mydata$rank)//mylogit<-glm
(admit~gre+gpa+rank,data=mydata,family="binomial")
//summary(mylogit)//
```

Decision tree – Reading Skills

```
library(party)//input.dat <- readingSkills[c(1:105),] //png(file =
"decision_tree1.png")//output.tree<- ctree( nativeSpeaker ~ age +
shoeSize + score, data = input.dat) //plot(output.tree)//
```

Use iris dataset and K-means Clustering algorithm

```
set.seed(20)//irisCluster<- kmeans(iris[, 3:4], 3, nstart =
20)//irisCluster//irisCluster$cluster<-
as.factor(irisCluster$cluster)//ggplot(iris, aes(Petal.Length, Petal.Width,
color = irisCluster$cluster)) + geom_point()//
```

ANOVA - iris

```
install.packages("datasets")//install.packages("qtlcharts")//library(datasets)
//library(qtlcharts)//data(iris)//iris$Species<-NULL//iplotCorr(iris,
reorder=TRUE)//
```

Calculator

```
add <- function(x, y) { return(x + y)}//subtract <- function(x, y) { return(x -
y)}//multiply <- function(x, y) { return(x * y)}//divide <- function(x, y) {
return(x / y)}//print("1.Add")// print("2.Subtract")//print("3.Multiply")//
print("4.Divide")//choice = as.integer(readline(prompt="Enter
choice[1/2/3/4]: "))// num1 = as.integer(readline(prompt="Enter first
number: ")) //num2 = as.integer(readline(prompt="Enter second number:
"))// operator <- switch(choice,"+","-","*","/")//result <- switch(choice,
add(num1, num2), subtract(num1, num2),multiply(num1, num2),
divide(num1, num2))//print(paste(num1, operator, num2, "=", result))//
```

Arithmetic – without objects

```
25+32//36-15//145*8 //365/7//
```

Arithmetic -with objects

```
A=4/B=2/c=A+B/c // A=5/B=2/c=A-B/c // A=10/B=2/c=A*B/c //  
A=10/B=2/c=A/B/c
```

Descriptive Statistics

```
data(mtcars)//str(mtcars)//dim(mtcars)//names(mtcars)//summary(mtcars)  
//quantile(x)//quantile(mtcars$mpg)//quantile(mtcars$wt, c(.2, .4, .8))  
//var(mtcars$wt)//
```

Subset() and Aggregate()

```
subset(iris,iris$Sepal.Length>7)
```

```
data(iris)//agg_mean = aggregate(iris[,1:4],  
by=list(iris$Species),FUN=mean) //agg_mean//
```

Cov mpg & gear || all variables

```
cov(mtcars$mpg,mtcars$gear)//cov(mtcars[,1:11])
```

Cor mpg & gear || all variables

```
cor(mtcars$mpg,mtcars$gear)// cor(mtcars[,1:11])
```

Boxplot

```
library(ggplot2)//input <- mtcars[,c('mpg','cyl')]/boxplot(mpg ~ cyl, data  
= mtcars, xlab = "number of cylinders", ylab = "miles per gallon", main =  
"mileage data")//dev.off()//
```

Scatter plot

```
library(ggplot2)//input<-mtcars[,c('cyl','mpg')]/plot(x = input$cyl, y =  
input$mpg,xlab = "Cylinders",  
ylab = "Miles per gallon",xlim = c(4, 8.5),ylim = c(10, 45),main = "Weight  
vs Mileage")//
```

Histogram

```
summary(iris)//par (mfrow = c(3,1))//hist (iris$Petal.Length)//  
hist (iris$petal.width)//hist (iris$sepal.width)
```

Bar Chart

```
par(mfrow = c(4,1))//barplot(iris$Sepal.Width,main= "Sepal Width")//  
barplot(iris$Sepal.Length, main= "Sepal Length")//  
barplot(iris$Petal.Length,main= "Petal Length")  
//barplot (iris$petal.width, main= "Petal width")
```

Pie Chart

```
vec< - iris$ Species//vec_data<-data.frame (table (vec))//cols<-  
c("red","green","blue")//per_label<-round(100*vec_data$Freq / sum  
(vec_data$Freq), 1)//pielabel= paste(per_label, "%", sep=" ")  
pie( vec_data$Freq, labels = pielabel, col= cols)  
legend("topright",c("setosa", "versicolor", "virginica"), fill=cels, cex = 0.8)
```

Cor relation Plot-overview-iris

```
d <- data.frame(x1=rnorm(10),//x2=rnorm(10),//x3=rnorm(10))//  
M <- cor(d) //install.packages("corrplot")//library('corrplot')  
corrplot(M, method = "square")// set.seed(1)//  
x <- matrix(rnorm(20), nrow=5, ncol=4)//y <- matrix(rnorm(15), nrow=5,  
ncol=3)//COR <- cor(x,y)//COR//  
image(x=seq(dim(x)[2]), y=seq(dim(y)[2]), z=COR, xlab="x column", ylab="y  
column")//text(expand.grid(x=seq(dim(x)[2]), y=seq(dim(y)[2])),  
labels=round(c(COR),2))//install.packages("datasets")//  
install.packages("qtlcharts")//library(datasets)//library(qtlcharts)//  
data(iris)//iris$Species<-NULL//iplotCorr(iris, reorder=TRUE)//
```

Reading CSV file //Sheet<-read.csv("file path")//print (Sheet)

Reading excel sheet// install.packages("xlsx")//Sheet<-read.xlsx("file
path")//print (Sheet)

Reading From web link

```
mydata <- read.csv("https://stats.idre.ucla.edu/stat/data/binary.csv")  
//print(mydata)
```

Reading from text Fileprint(getwd())//setwd("*file path*")//myData =
read.delim("text.txt", header = FALSE)//print(myData)//