iris

dim(iris)

#1: 150 rows

#2: quantitative; sepal length,sepal width, petal length, petal width

#qualitative; species

class(iris)

head(iris,5)

head(iris$Sepal.Length,10)

summary(iris)

with(iris, table(Species))

with(iris, pie(table(Species), cex=0.8))

var(iris$Sepal.Length)

# 0.6856935

with(iris, cor(Sepal.Length, Petal.Length))

#0.8717538

hist(iris$Sepal.Length)

with(iris, plot(density(Sepal.Length), col="navy", main="", xlab="Sepal Length"))

title(main = "Density function of Sepal Length", cex=1.2, col.main="blue4", font.main=4)

with(iris, plot(Sepal.Length, Sepal.Width, col="navy", pch="+"))

with(iris, plot(Petal.Length, Petal.Width, pch=c(23,24,25)[unclass(Species)], main="

Mark's Iris Data"))

with(iris,c(23,24,25)[unclass(Species)])

with(iris, plot(iris$Petal.Length, iris$Petal.Width, pch=21,

bg=c("red","green3","blue")[unclass(iris$Species)], main=" Marks’s Iris Data"))

pairs(iris[1:4], main = " Mark’s Iris Data", pch = 21, bg = c("red", "green3",

"blue")[unclass(iris$Species)])

panel.pearson <- function(x, y, ...) {

horizontal <- (par("usr")[1] + par("usr")[2]) / 2;

vertical <- (par("usr")[3] + par("usr")[4]) / 2;

text(horizontal, vertical, format(abs(cor(x,y)), digits=2))

}

pairs(iris[1:4], main = "Your\_name’s Iris Data", pch = 21, bg =

c("red","green3","blue")[unclass(iris$Species)], upper.panel=panel.pearson)

pairs(iris[1:4], main = " Mark’s Iris Data -- 3 species", pch = 21, bg = c("red",

"green3", "blue")[unclass(iris$Species)], lower.panel=NULL,

labels=c("SL","SW","PL","PW"), font.labels=2, cex.labels=4.5)

# when first going through the data and making simple graphs and plots it was hard to see any distinctions or relationships

# in the data, however as the plots became more sophisticated and complex it helped show the differences more clearly.

# for example the red ones, while not being as long were wider, were as the blue and green were generally longer but more narrow

# the red data was always more clustered and separated whereas the green and blue often mixed.