#veri1

veri1 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri1.txt", sep="")

attach(veri1)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri1)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri1$y)>50) 4/length(veri1$y) else 4/(length(veri1$y)-(length(veri1)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri1)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri1)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

rm(veri1,sonuc,inf,cooksd,hat,stdres,studres,x4)

#veri2

veri2 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri2.txt", sep="")

attach(veri2)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri2)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri2$y)>50) 4/length(veri2$y) else 4/(length(veri2$y)-(length(veri2)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri2)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri2)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

rm(veri2,sonuc,inf,cooksd,hat,stdres,studres,x4)

#veri3

veri3 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri3.txt", sep="")

attach(veri3)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri3)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri3$y)>50) 4/length(veri3$y) else 4/(length(veri3$y)-(length(veri3)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri3)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri3)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

rm(veri3,sonuc,inf,cooksd,hat,stdres,studres,x4)

#veri4

veri4 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri4.txt", sep="")

attach(veri4)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri4)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri4$y)>50) 4/length(veri4$y) else 4/(length(veri4$y)-(length(veri4)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri4)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri4)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

rm(veri4,sonuc,inf,cooksd,hat,stdres,studres,x4)

#veri5

veri5 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri5.txt", sep="")

attach(veri5)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri5)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri5$y)>50) 4/length(veri5$y) else 4/(length(veri5$y)-(length(veri5)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri5)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri5)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

rm(veri5,sonuc,inf,cooksd,hat,stdres,studres,x4)

#veri6

veri6 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri6.txt", sep="")

attach(veri6)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri6)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri6$y)>50) 4/length(veri6$y) else 4/(length(veri6$y)-(length(veri6)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri6)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri6)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

rm(veri6,sonuc,inf,cooksd,hat,stdres,studres,x4)

#veri7

veri7 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri7.txt", sep="")

attach(veri7)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri7)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri7$y)>50) 4/length(veri7$y) else 4/(length(veri7$y)-(length(veri7)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri7)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri7)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

rm(veri7,sonuc,inf,cooksd,hat,stdres,studres,x4)

#veri8

veri8 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri8.txt", sep="")

attach(veri8)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri8)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri8$y)>50) 4/length(veri8$y) else 4/(length(veri8$y)-(length(veri8)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri8)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri8)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

rm(veri8,sonuc,inf,cooksd,hat,stdres,studres,x4)

#veri9

veri9 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri9.txt", sep="")

attach(veri9)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri9)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri9$y)>50) 4/length(veri9$y) else 4/(length(veri9$y)-(length(veri9)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri9)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri9)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

rm(veri9,sonuc,inf,cooksd,hat,stdres,studres,x4)

#veri10

veri10 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri10.txt", sep="")

attach(veri10)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri10)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri10$y)>50) 4/length(veri10$y) else 4/(length(veri10$y)-(length(veri10)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri10)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri10)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

rm(veri10,sonuc,inf,cooksd,hat,stdres,studres,x4)

#veri11

veri11 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri11.txt", sep="")

attach(veri11)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri11)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri11$y)>50) 4/length(veri10$y) else 4/(length(veri11$y)-(length(veri11)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri11)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri11)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

rm(veri11,sonuc,inf,cooksd,hat,stdres,studres,x4)

#veri12

veri12 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri12.txt", sep="")

attach(veri12)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri12)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri12$y)>50) 4/length(veri12$y) else 4/(length(veri12$y)-(length(veri12)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri12)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri12)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

rm(veri12,sonuc,inf,cooksd,hat,stdres,studres,x4)

#veri13

veri13 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri13.txt", sep="")

attach(veri13)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri13)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri13$y)>50) 4/length(veri13$y) else 4/(length(veri13$y)-(length(veri13)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri13)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri13)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

rm(veri13,sonuc,inf,cooksd,hat,stdres,studres,x4)

#veri14

veri14 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri14.txt", sep="")

attach(veri14)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri14)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri14$y)>50) 4/length(veri14$y) else 4/(length(veri14$y)-(length(veri14)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri14)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri14)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

rm(veri14,sonuc,inf,cooksd,hat,stdres,studres,x4)

#veri15

veri15 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri15.txt", sep="")

attach(veri15)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri15)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri15$y)>50) 4/length(veri15$y) else 4/(length(veri15$y)-(length(veri15)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri15)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri15)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

rm(veri15,sonuc,inf,cooksd,hat,stdres,studres,x4)

#veri16

veri16 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri16.txt", sep="")

attach(veri16)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri16)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

confint(sonuc, level=.95)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri16$y)>50) 4/length(veri16$y) else 4/(length(veri16$y)-(length(veri16)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri16)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri16)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

rm(veri16,sonuc,inf,cooksd,hat,stdres,studres,x4)

#veri17

veri17 <- read.csv("C:/Users/ahmet/Desktop/regresyon\_odev/veri17.txt", sep="")

attach(veri17)

#Nitel veri ayarlaması

x4<-as.factor(x4)

#Normallik testi

qqnorm(y)

qqline(y)

pairs(veri17)

library(nortest)

ad.test(y)

#Regresyon Modeli

sonuc<-lm(y~x1+x2+x3+x4)

summary(sonuc)

predict(sonuc)

confint(sonuc, level=.95)

cor(veri17)

#Aykırı Değerlerin İncelenmesi

influence.measures(sonuc)

inf<-ls.diag(sonuc)

inf

library(zoo)

cooksd<- cooks.distance(sonuc)

plot(cooksd, pch="\*", cex=2, main="InfluentialObsbyCooksdistance")

abline(h = if (length(veri17$y)>50) 4/length(veri17$y) else 4/(length(veri17$y)-(length(veri17)-1)-1) , col="red")

hat<-inf$hat

plot(hat, pch="\*", cex=2, main="Leverage Value by Hat value")

abline(h = 2\*length(veri17)/length(y) , col="blue")

text(x=1:length(hat)+1, y=hat, labels=ifelse(hat>2\*length(veri17)/length(y),index(hat),""), col="red")

studres<-inf$stud.res

plot(studres, pch="\*", cex=2, main="Outlier by Studentized residuals")

abline(h = 3 , col="blue")

text(x=1:length(studres)+1, y=studres, labels=ifelse(studres>3,index(studres),""), col="red")

stdres<-inf$std.res

plot(stdres, pch="\*", cex=2, main="Outlier by Standadized residuals")

abline(h = 2 , col="blue")

text(x=1:length(stdres)+1, y=stdres, labels=ifelse(stdres>2,index(stdres),""), col="red")

#Değişken Varyanslılık Sorunu İncelenmesi

library(lmtest)

bptest(sonuc)

par(mfrow=c(2,2))

plot(predict(sonuc),inf$stud.res, ylab = "studentized residuals" , xlab = "predict value")

#Öz İlişki Sorunu İncelenmesi

dwtest(sonuc)

#çoklu Bağlantı Sorunu İncelenmesi

detach("package:car", unload=TRUE)

library(DAAG)

library(perturb)

colldiag(model.matrix(sonuc))

vif(sonuc)

ort1<-mean(x1)

kt1<-sum((x1-ort1)^2)

skx1<-(x1-ort1)/(kt1^0.5)

ort2<-mean(x2)

kt2<-sum((x2-ort2)^2)

skx2<-(x2-ort2)/(kt2^0.5)

ort3<-mean(x3)

kt3<-sum((x3-ort3)^2)

skx3<-(x3-ort3)/(kt3^0.5)

x<-cbind(skx1,skx2,skx3)

sm<- eigen (t(x)%\*%x)

signif(sm$values,3)

signif(sm$vectors,3)

V<-sm$vectors

t(V)%\*%V

V %\*% diag(sm$values) %\*% t(V)

#Uyum Kestirimi

a <- matrix(c(1,0,0,0,1,0),3,2)

a

uyum <- c(10.137,0.951586,5.650,1,0)

names(uyum) <- c("x1","x2","x3","x42","x43")

uyum

yi <- -9.630918+8.641663\*uyum[1]+4.319856\*uyum[2]-3.740896\*uyum[3]-2.994661\*uyum[4]-4.995958\*uyum[5]

yi

#Ön Kestirimi

a <- matrix(c(1,0,0,0,1,0),3,2)

a

on <- c(11.32,0.278585,6.875,0,0)

names(on) <- c("x1","x2","x3","x42","x43")

on

ysapkai <- -9.630918+8.641663\*on[1]+4.319856\*on[2]-3.740896\*on[3]-2.994661\*on[4]-4.995958\*on[5]

ysapkai

#Güven Aralıkları

confint(sonuc, level=.99)

#İleri Doğru Değişken Seçimi

library(stats)

lm.null <- lm(y ~ 1)

forward <- step(lm.null,lny~x1+x2+x3+x4, direction = "forward")

forward

summary(forward)

#Geriye Doğru Değişken Seçimi

backward<-step(sonuc,direction="backward")

summary(backward)

#Adımsal Değişken Seçimi

library(MASS)

step.model <- stepAIC(sonuc, direction = "both", trace = FALSE)

step.model

summary(step.model)