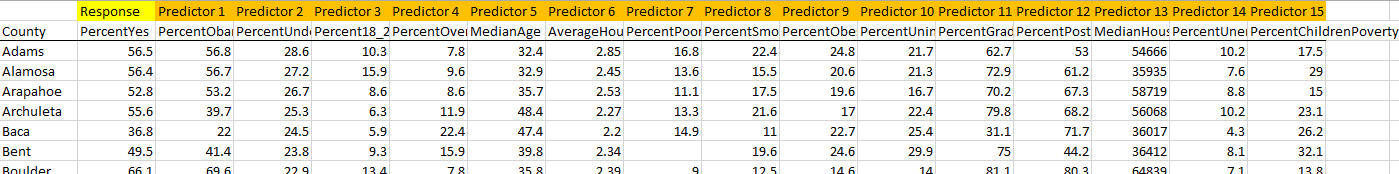
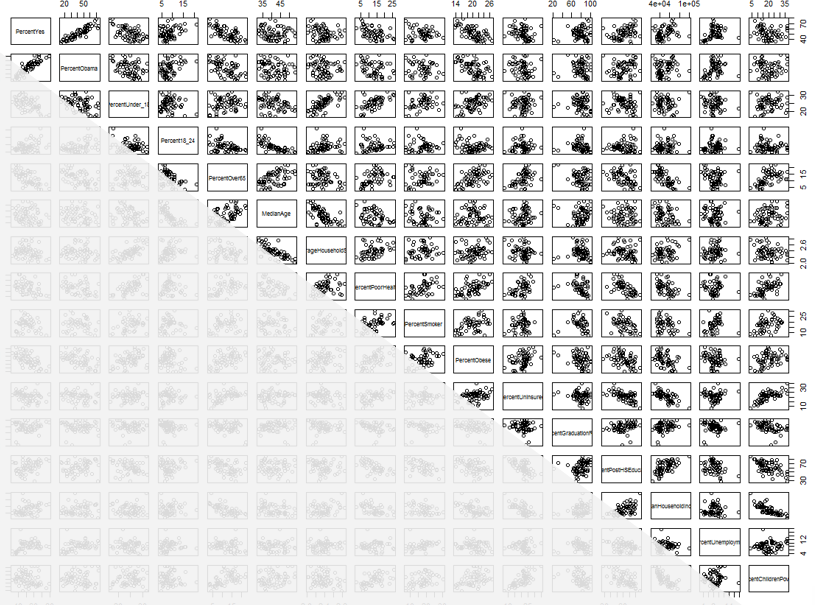
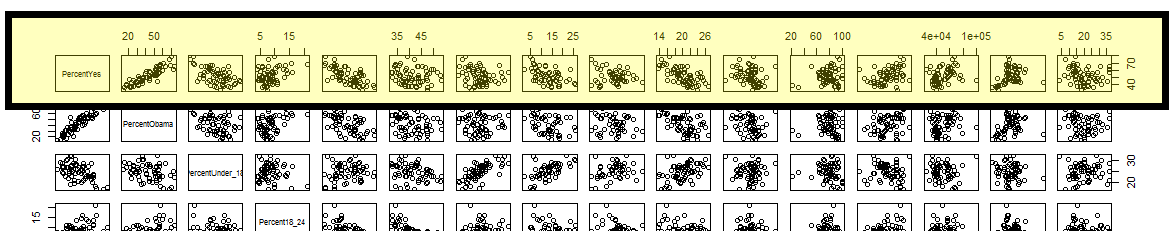
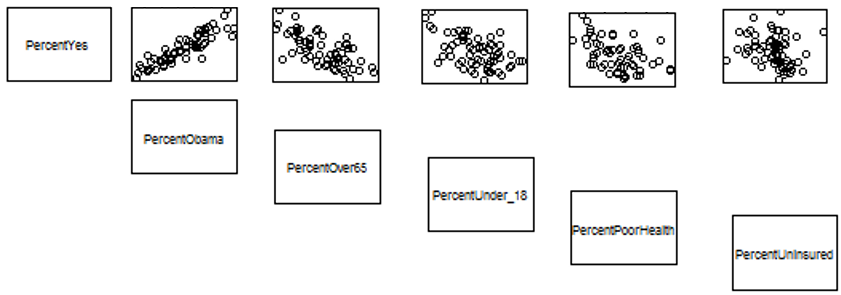
Variable Importance in R

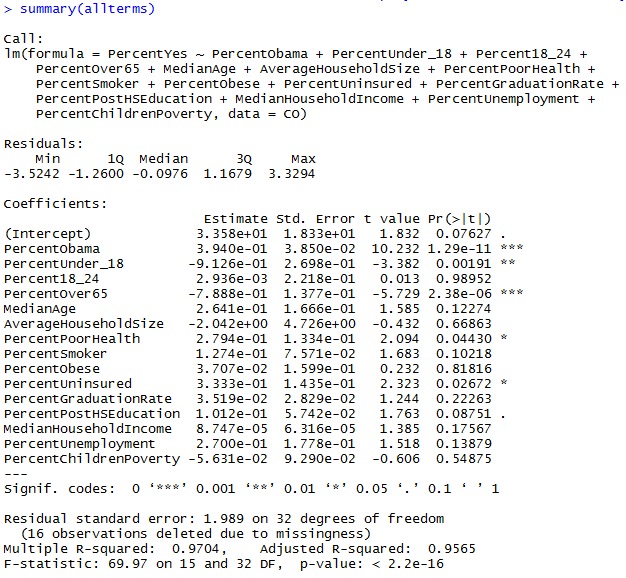


> pairs(CO[,2:17])

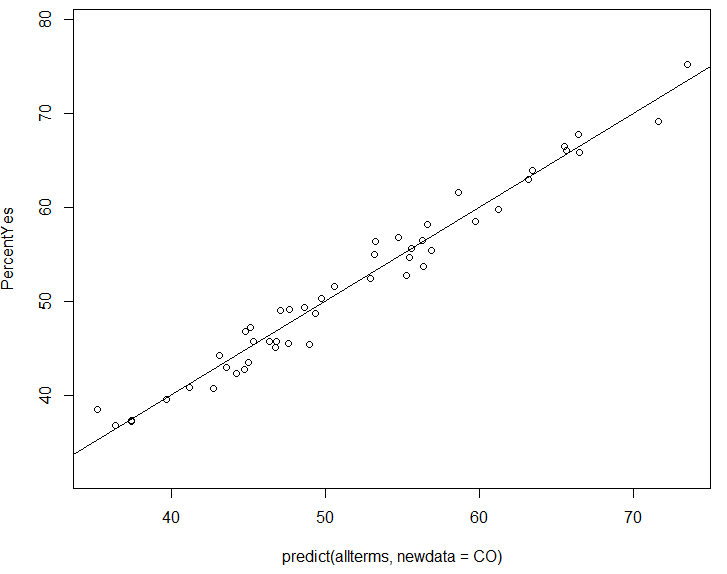




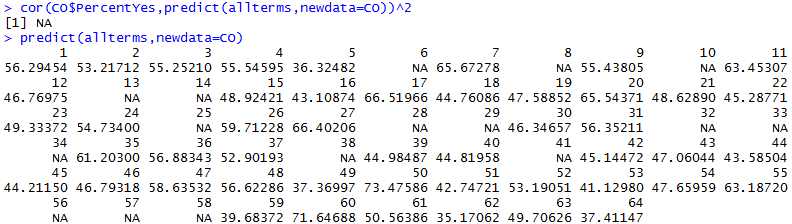








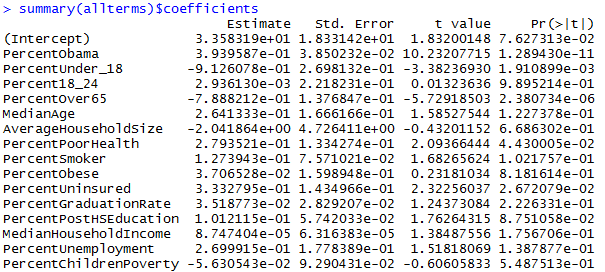


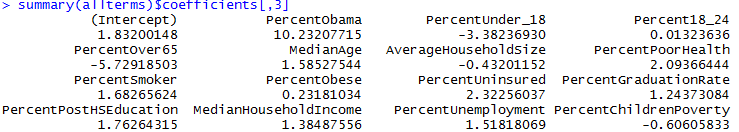


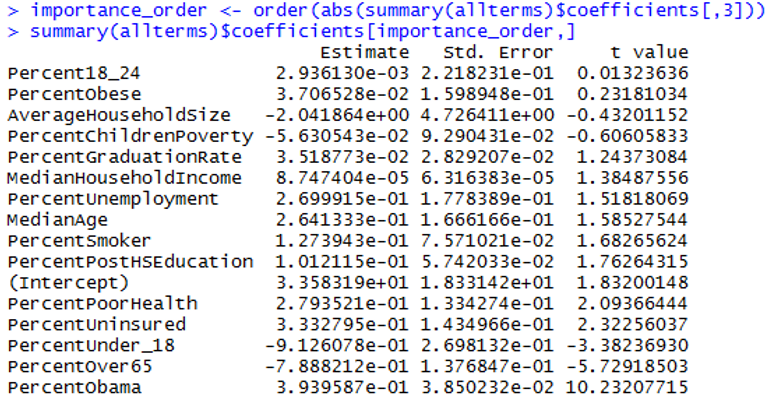


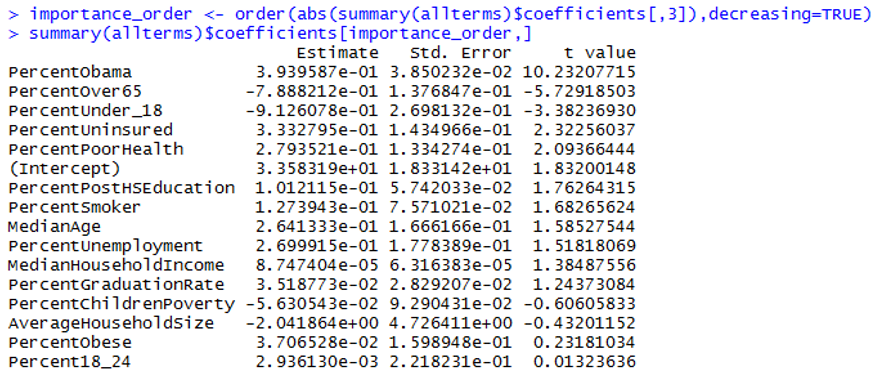
allterms <- lm(PercentYes ~ PercentObama + PercentUnder\_18 + Percent18\_24 + PercentOver65 + MedianAge + AverageHouseholdSize + PercentPoorHealth + PercentSmoker + PercentObese + PercentUninsured + PercentGraduationRate + PercentPostHSEducation + MedianHouseholdIncome + PercentUnemployment + PercentChildrenPoverty, data=CO\_NoNA)

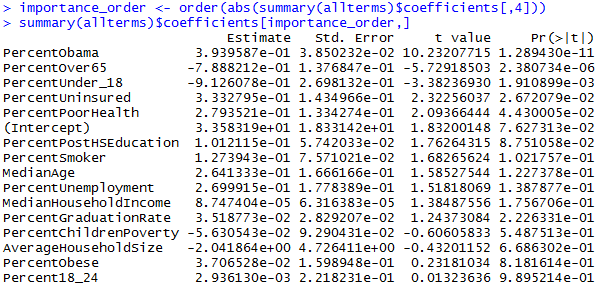












> avg\_error\_original <- mean(abs(CO\_NoNA$PercentYes - predict(allterms,newdata=CO\_NoNA)))

> avg\_error\_original

[1] 1.339041

> CO\_NoNA\_Temp <- CO\_NoNA

> CO\_NoNA\_Temp[,3] <- sample(CO\_NoNA\_Temp[,3])

> avg\_error\_temp <- mean(abs(CO\_NoNA\_Temp$PercentYes - predict(allterms,newdata=CO\_NoNA\_Temp)))

> avg\_error\_temp

[1] 6.664014

avg\_error\_temp = data.frame(i=rep(0,15),error=rep(0,15))

#Looping through all predictors

for(i in 1:15){

CO\_NoNA\_Temp <- CO\_NoNA

#View(CO\_NoNA\_Temp)

avg\_error\_temp[i,1] <- i

CO\_NoNA\_Temp[,(2+i)] <- sample(CO\_NoNA\_Temp[,(2+i)])

avg\_error\_temp[i,2] <- mean(abs(CO\_NoNA\_Temp$PercentYes - predict(allterms,newdata=CO\_NoNA\_Temp)))

}

> error\_order<-order(avg\_error\_temp[,2],decreasing=TRUE)

> avg\_error\_temp[error\_order,]

i error

1 1 7.346729

4 4 4.619174

2 2 3.610567

7 7 2.373233

10 10 2.136315

12 12 1.982633

5 5 1.960197

13 13 1.819093

8 8 1.532174

14 14 1.500116

11 11 1.438033

15 15 1.394988

9 9 1.372453

6 6 1.354339

3 3 1.340008