Appendix of Regression Models Course Project

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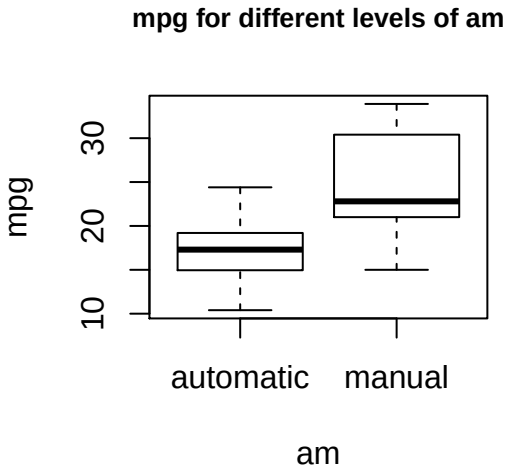
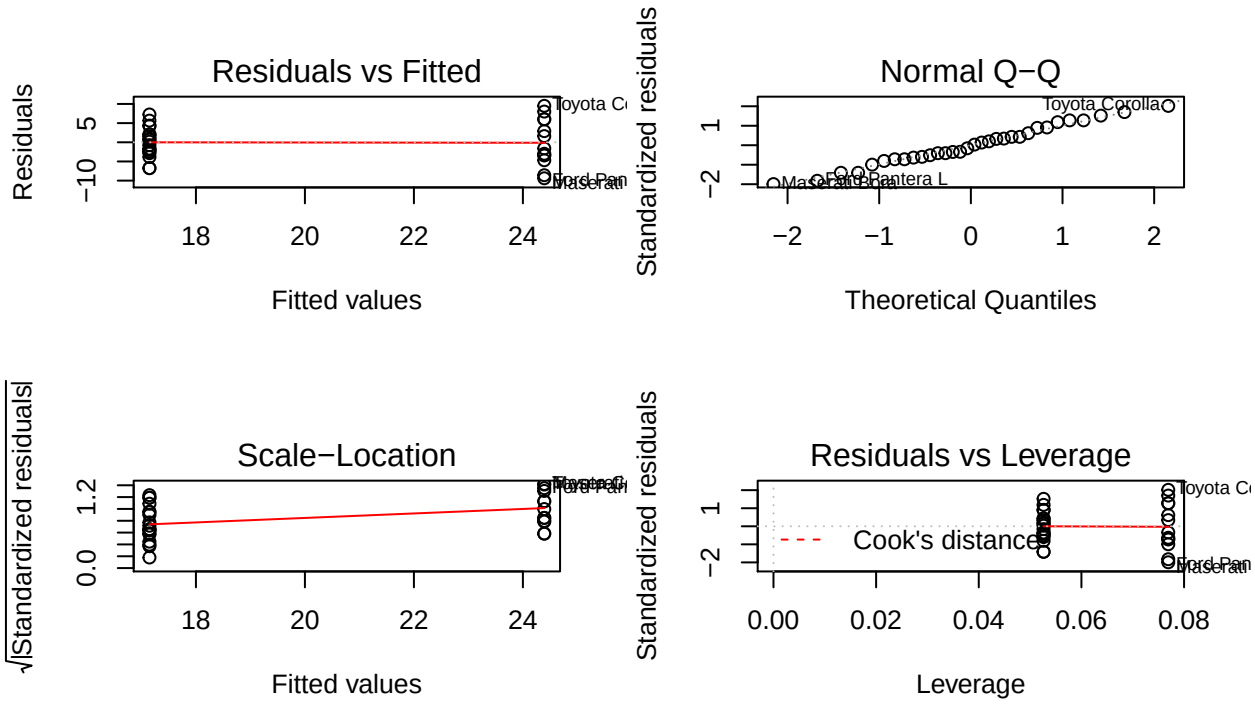
Plot of mpg for different levels of am

```
plot(mpg ~ am, data = mtcars, main = "mpg for different levels of am", cex.main = .8)
```



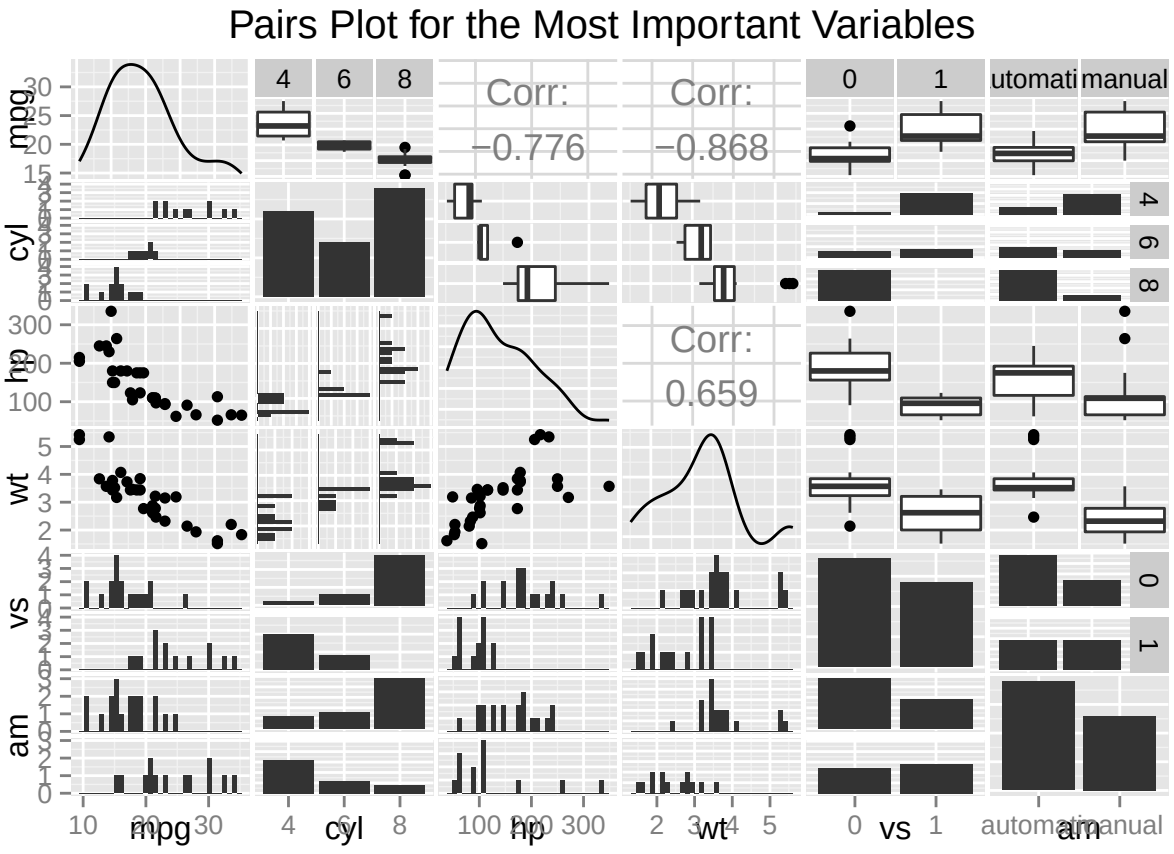
Residual Plots for first model

```
par(mfrow = c(2, 2))
plot(fit.lm1)
```



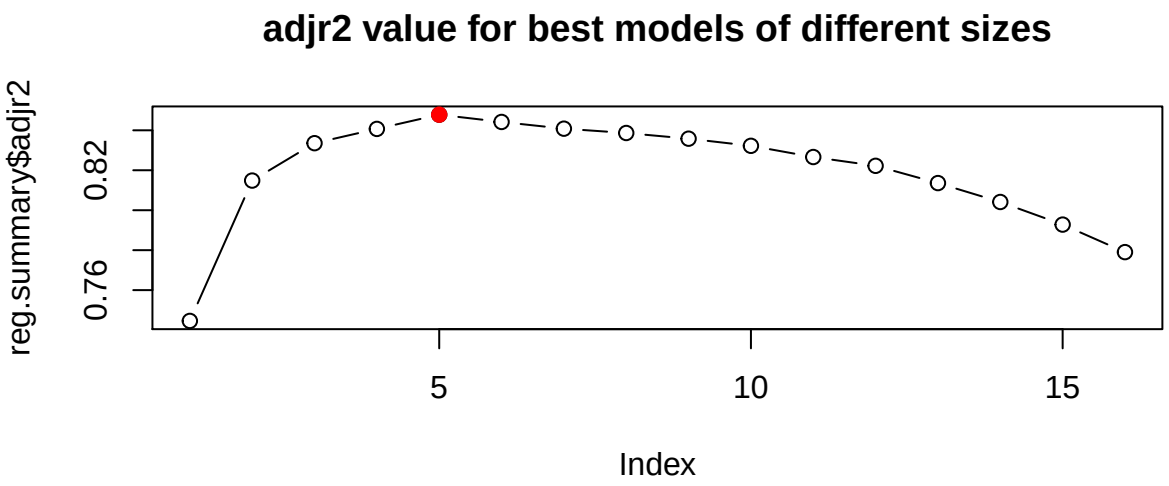
Pairs plot for the Most Important Variables

```
library(GGally)
ggpairs(mtcars, columns = c(1, 2, 4, 6, 8, 9),
        title = "Pairs Plot for the Most Important Variables")
```



Finding the Best Linear Model

```
library(leaps)
regfit.full <- regsubsets(mpg ~ ., data = mtcars, nvmax = 16)
reg.summary <- summary(regfit.full)
maxAdjR2 <- which.max(reg.summary$adjr2)
#coef(regfit.full, maxAdjR2)
plot(reg.summary$adjr2, type = "b", main = "adjr2 value for best models of different sizes")
points(maxAdjR2, reg.summary$adjr2[maxAdjR2], col = "red", pch = 19)
```



Residual Plots for the best model

```
par(mfrow = c(2, 2))
plot(fit.lm2)
```