Machine Learning Course Project

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Executive Summary

This report is the final product of the Regression Models Course Project. We try to answer the following questions about the Motor Trend Car Road Tests dataset :

- Is an automatic or manual transmission better for MPG ?
- What is the MPG difference quantification between automatic and manual transmissions ?

We'll show that a manual transmission is better than an automatic one. Quantitatively the factor by witch the MPG is multiplied when switching from an automatic to a manual transmission is in the interval [0.05,4.12] with a 85% confidence. So the type of transmission has an impact on the MPG value but the quantification is not obvious.

1) Reading in data

```
training <- read.csv(file="./data/pml-training.csv", header=TRUE, sep=",") %>%
    select(roll_belt,pitch_belt,yaw_belt,total_accel_belt,gyros_belt_x,gyros_belt_y,gyros_belt_z,accel_

testing <- read.csv(file="./data/pml-testing.csv", header=TRUE, sep=",") %>%
    select(roll_belt,pitch_belt,yaw_belt,total_accel_belt,gyros_belt_x,gyros_belt_y,gyros_belt_z,accel_
```