Assignment_4

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Coursera Reproducible Pitch

See the Regression Models Course Project

- URL: *https://github.com/Arcaici/DevelopingDataProduct_Assignments*
- Find here all the data that have been use for this presentation and also for the first part of the data Science Project: "First, you will create a Shiny application and deploy it on Rstudio's servers.Second, you will use Slidify or Rstudio Presenter to prepare a reproducible pitch presentation about your application."

Find all details here

URL: *https://www.coursera.org/learn/data-products/peer/tMYrn/course-project-shiny-application-and-reproducible-pitch*

mtcars Dataset

Motor Trend Car Road Tests

The data was extracted from the 1974 Motor Trend US magazine, and comprises fuel consumption and 10 aspects of automobile design and performance for 32 automobiles (1973-74 models).

Source

Henderson and Velleman (1981), Building multiple regression models interactively. Biometrics, 37, 391-411.

```
library(datasets)
head(mtcars, 3)
```

```
##                mpg cyl disp  hp drat    wt  qsec vs am g
## Mazda RX4     21.0   6  160 110 3.90 2.620 16.46  0  1
## Mazda RX4 Wag 21.0   6  160 110 3.90 2.875 17.02  0  1
## Datsun 710    22.8   4  108  93 3.85 2.320 18.61  1  1
```

mtcars Dataset - Format

A data frame with 32 observations on 11 variables.

Index	Field	Detail
[, 1]	mpg	Miles/(US) gallon
[, 2]	cyl	Number of cylinders
[, 3]	disp	Displacement (cu.in.)
[, 4]	hp	Gross horsepower
[, 5]	drat	Rear axle ratio
[, 6]	wt	Weight (lb/1000)
[, 7]	qsec	1/4 mile time
[, 8]	vs	V/S
[, 9]	am	Transmission (0 = automatic, 1 = manual)
[,10]	gear	Number of forward gears
[,11]	carb	Number of carburetors

Analysis - Main Code

```
fit <- lm(mpg ~. , data = mtcars)
summary(fit)
```

```
##
## Call:
## lm(formula = mpg ~ ., data = mtcars)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -3.4506 -1.6044 -0.1196  1.2193  4.6271
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) 12.30337   18.71788   0.657   0.5181
## cyl         -0.11144    1.04502  -0.107   0.9161
## disp         0.01334    0.01786   0.747   0.4635
## hp          -0.02148    0.02177  -0.987   0.3350
## drat         0.78711    1.63537   0.481   0.6353
```

Plotting

```
plot(fit)
```