

STATS 3DS3: Practice Assignment

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Learning goals

What are your learning goals for this course? My goal for this course is to get a better understanding of what a data scientist does and what tools and statistical techniques do they employ to do it.

Solution 1

Just run the following:

Model $Y = \theta X + \epsilon$, where Y is speed and X is dist. We make there is no output by running the following chunk.

We attach the image **Practice_assignment_solution1.png** after the linear-regression chunk.

```
data(cars)
d <- cars
fit_lm <- lm(speed ~ dist, data = cars)
summary(fit_lm)
```



```
##
## Call:
## lm(formula = speed ~ dist, data = cars)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -7.5293 -2.1550  0.3615  2.4377  6.4179
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)  8.28391    0.87438   9.474 1.44e-12 ***
## dist         0.16557    0.01749   9.464 1.49e-12 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 3.156 on 48 degrees of freedom
## Multiple R-squared:  0.6511, Adjusted R-squared:  0.6438
## F-statistic: 89.57 on 1 and 48 DF,  p-value: 1.49e-12
```

Figure 1: Summary of the fit

Solution 2

Just run the following:

We use the variables that we defined in the [header.tex](#) file.

$$\mathbf{Y} = \mathbf{X}\boldsymbol{\beta} + \boldsymbol{\epsilon}$$

Solution 3

Just run the following:

We cite R for Data Science (Wickham and Grolemund 2016)

Solution 4

Just run the following:

We **highlight a text in color**.

We define color commands in `header.tex` and use them to **highlight a text in color**

References

Wickham, Hadley, and Garrett Grolmund. 2016. *R for Data Science: Import, Tidy, Transform, Visualize, and Model Data*. " O'Reilly Media, Inc."