

Tutorial 2

Machine Learning and Big Data for Economics and Finance

This week's tutorial will only consist of practical activities using R.

List of activities

- I. Complete the whole of section 2.3.1
- II. Complete **Section 3.6 Lab: Linear Regression**. Section 3.6.1 to 3.6.5
- III. Complete the following exercise.

Exercise:

1. Execute the following R commands and explain what they do.

```
n = 100  
a = 2.1  
b = -0.9
```

```
x = runif(n)
```

```
y = b*x + rnorm(n, mean=a)
```

2. Fit a linear regression model where the input is x and the output is y by coding the learned function \hat{f} using the formulas given in the slides.
3. Compare your results with the R function `lm()`.

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