# AYU - Pod Week 1

## Table of contents

*This document will help you install R, the most popular statistical programming language, and Rstudio, the most popular programming editor for R, into your computer. You will also learn about how R can be used as a powerful calculator and about how to import data and implement linear regression. Follow the section 1 to 3 to do the AYU Questions in section 4.*

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Question 1

Install R and Rstudio

*How to do it?*

- Download R at this link
- Download Rstudio at this link
- Install R
- Install Rstudio

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Question 2

Run linear model on the following data

| x | 2 | 3 | 5 | 6 | 1 | 9 | 10 | 15 |
|---|---|---|---|---|---|---|----|----|
| y | 1 | 4 | 6 | 4 | 4 | 3 | 20 | 25 |

*How to do it?*

- Open Rstudio
- In the console, create two vectors $x$ and $y$ by typing in

```
x = c(2, 3, 5, 6, 1, 9, 10, 15)
y = c(1, 4, 6, 4, 4, 3, 20, 25)
```

- To regress $y$ on $x$ use the `lm` function

```
my_linear_model = lm(y~x)
```

- To show the result use

```
summary(my_linear_model)
```

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Question 3