

ML EXERCISES - BASICS R

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EXERCISE: FIND R-PACKAGES

Go to <https://cran.r-project.org/> and search for packages that can be used:

- 1) to reduce overfitting
- 2) for regression trees
- 3) for gradient boosting
- 4) for neural networks
- 5) for clustering

SOLUTION: FIND R-PACKAGES

EXERCISE: LOAD BUILT-IN DATA

1) LOAD THE THE BUILT-IN DATASET `SWISS`

- ▶ a - How many observations and variables are available?
- ▶ b - What is the scale level of the variables?

2) CREATE AN INTERACTIVE DATA TABLE

SOLUTION: LOAD BUILT-IN DATA

```
## [1] 47  6
```

```
## 'data.frame':    47 obs. of  6 variables:
```

```
## $ Fertility      : num  80.2 83.1 92.5 85.8 76.9 76.1 83.8
## $ Agriculture    : num  17 45.1 39.7 36.5 43.5 35.3 70.2 67
## $ Examination    : int   15 6 5 12 17 9 16 14 12 16 ...
## $ Education      : int   12 9 5 7 15 7 7 8 7 13 ...
## $ Catholic        : num   9.96 84.84 93.4 33.77 5.16 ...
## $ Infant.Mortality: num   22.2 22.2 20.2 20.3 20.6 26.6 23.6
```

EXERCISE: RANDOM NUMBERS

- 1) Draw 8 random numbers from the uniform distribution and save them in a vector `x`
- 2) Compute the logarithm of `x`, return suitably lagged and iterated differences,
- 3) compute the exponential function and round the result

```
## [1] 0.0 140.2 1.2 0.3 0.8 0.3 1.4
```

SOLUTION: RANDOM NUMBERS

```
## [1] 2.0 1.5 1.3 0.6 0.1 5.5 3.7
```