



**Mondragon  
Unibertsitatea**

Escuela Politécnica  
Superior

# Preliminaries

What do we need?

Evaluation scheme

# IT requirements (30/09/2019)

- Python 3.7.4
- Numpy 1.16.5
- Scipy 1.3.1
- Scikit-Learn 0.21.3
- Pandas 0.25.1
- Jupyter Notebooks 1.0.0
- Seaborn 0.9.0
- Bokeh 1.3.4
- Matplotlib 3.1.1
- Ipython 7.8.0
- Imbalanced-learn 0.5.0

# **Background**

- Python3, numpy, pandas and scikit-learn
- Data file types and data structures (CSV, dataframes, ...)
- Descriptive Statistics and Probability
- Linear Algebra

# Background

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# Language reminder

- Matricial / tabular data (structured data)
  - Rows:
    - Sample
    - Observation
    - Item
    - Individual
    - Input values / output value or target value
  - Columns:
    - Variable
    - Attribute
    - Characteristic
    - Feature
    - Types:
      - Independent vs dependent
      - Inputs vs target
- Train / Validation / Test
  - Is model selection part of the learning process or some kind of meta-learning?
  - External or cross validation?
  - Only for determining the goodness of a fixed model or for selecting its characteristics as well?

|           | X1  | X2         | ... | Xn    | Y      |
|-----------|-----|------------|-----|-------|--------|
| Samples   | A   | 15/03/2019 | ... | 4.68  | +1     |
|           | D   | 11/09/2001 | ... | -0.23 | Setosa |
|           | A   | 04/05/1976 | ... | 2.00  | NaN    |
|           | F   | 20/07/1969 | ... | 28.23 | NA     |
|           | G   | 06/06/1944 | ... | -12.9 | 6      |
|           | F   | 23/06/1912 | ... | 4.129 | -3.57  |
|           | ... | ...        | ... | ...   | ...    |
|           | ... | ...        | ... | ...   | ...    |
| Variables |     |            |     |       |        |



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Eskerrik asko  
Muchas gracias  
Thank you

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MGEP

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