

# Fundamentos de Machine Learning para Geometalurgia Python

24 de abril al 4 de mayo 2023

# Agenda

## Machine Learning basis



## Case study

**Univariate  
Exploratory Data Analysis (EDA)**

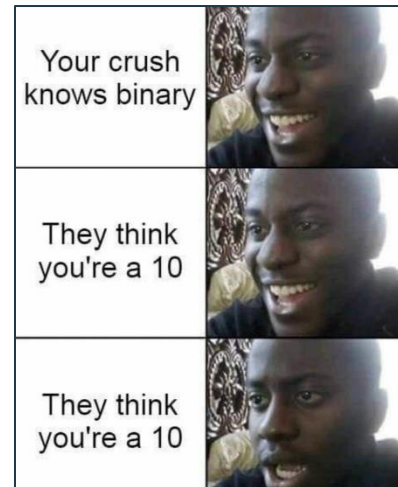
**Data Preparation**

**Regression model (proxy) for  
geometallurgical parameter  $A_i$**

# Binary Number System

Representation of a number in terms of 0 and 1 only.

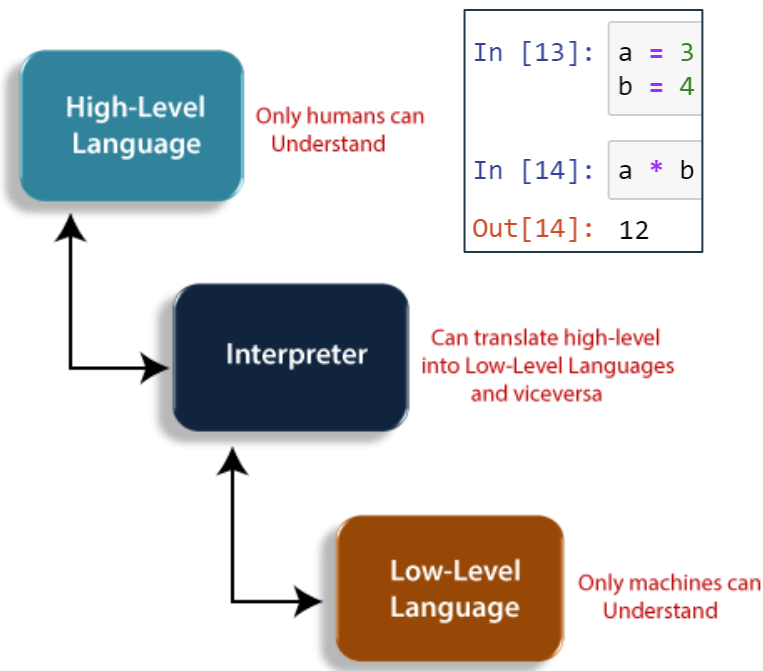
Decimal Number	Binary Number
1	1
2	10
3	11
4	100
5	101
6	110
7	111
8	1000
9	1001
10	1010



There are 10 kinds of people in this world. Those who understand binary and those who don't.

# Python

High-level programming language. Simple, easy to learn syntax emphasizes readability. The Python interpreter and the extensive standard library are freely distributed.



```
In [13]: a = 3  
         b = 4  
  
In [14]: a * b  
  
Out[14]: 12
```

*Guido van Rossum*



# Why learn Python?

👁 Python is an in-demand, accessible programming language with an active, ever-growing community of users.

🔗 It's relatively easy to learn and incredibly versatile, and it's used in a variety of fields.

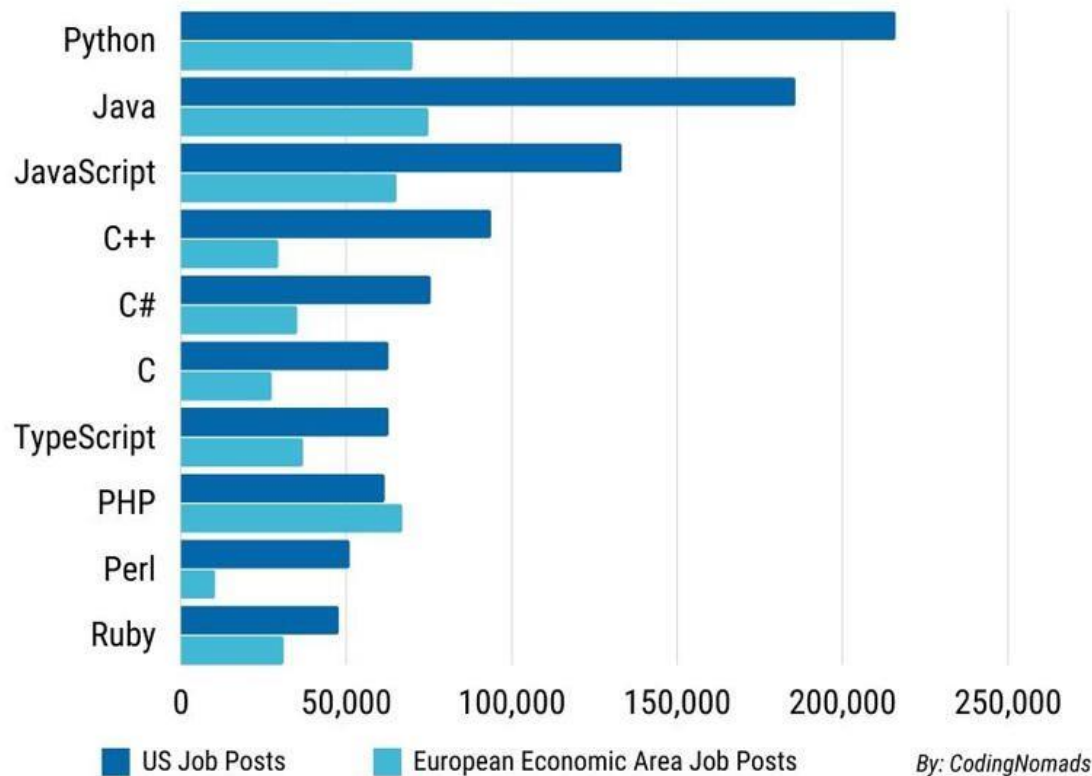
🕵 Python is the most-used programming language for machine learning.

Source: <https://techbootcamps.utexas.edu/blog/why-learn-python-get-startedprogramming/#:~:text=Why%20Learn%20Python%3F-,Five%20Reasons%20to%20Start%20Programming%20With%20Python%20in%202022,a%20great%20place%20to%20start.>

# Why learn Python?

## Most in-demand programming languages of 2022

*Based on LinkedIn job postings in the USA & Europe*



Source: <https://www.techrepublic.com/article/the-best-programming-languages-to-learn-in-2022/>

# Python official documentation

<https://www.python.org/>

