Data Valley

# I- Data Processing & Analysis

## 01. Pandas

- Used to wrangle and clean different data formats.
- It's highly efficient and has a wide range of functionalities.

## 02. Numpy

- Used for scientific computation and performing math operations on arrays.
- It has fast functions for numerical processes.

## 03. Scipy

- Used to perform high-level computations and has modules for linear algebra and statistics.
- It's highly efficient and has a wide range of functionalities.

# II- Machine Learning

## 04. Scikit learn

- Used to train and test supervised and unsupervised machine learning models.

## 05. TensorFlow

- Used to design and deploy machine learning models.
- Used in time series analysis and speech recognition.

## 06. PyCaret

- A low code library for deploying and testing machine learning models.

## 07. Keras

- Used in deep learning and artificial neural networks.

# III- Visualization

## 08. Matplotlib

- Used to create 2D data visualizations.
- It has a good variety of tools and rich documentation.

## 09. Plotly

- Used to create 3D data visualizations.
- The charts have interactive options and can be easily shared.

## 10. Autoviz

- Used to create automatic visualizations by detecting the most important features.
- It's easy to use and can work with datasets of different formats and sizes.

## 11. Ggplot

- Used to create combined and different types of visualizations.
- It's easy to use and can be used both in Python and R programming languages.

# IV- Data Mining

## 12. Beautiful soup

- Used to scrape data HTML and XML websites.
- It can be used to extract different data parts and save the parsed data into any format.

## 13. Scrapy

- Used to scrape data from APIs and in building crawling bots.