

Welcome!

Basic Machine Learning Mentorship Batch 5

Mentorship Information

1. Class will be held every **Saturday and Sunday** for 4 weeks start from March 13, 2021 at **13.00 pm**
2. Please join the class on time or give confirmation if you're late or can not attend the class
3. To accomplish mentorship program and get certificate, absence, assignment and final project is crucial
4. Be active and respect other during the class. Enjoy the process to learn!

Mentorship Agenda

Pert 1 : Data Loading

Pert 2 : Data Visualization

Pert 3 : Data Preprocessing

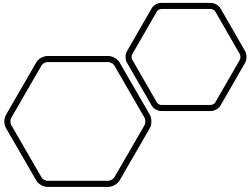
Pert 4 : Machine Learning - Linear & Logistic Regression

Pert 5 : Machine Learning – SVM

Pert 6 : Machine Learning – Random Forest

Pert 7 : Machine Learning – Clustering

Pert 8 : Final Project & Team Presentation

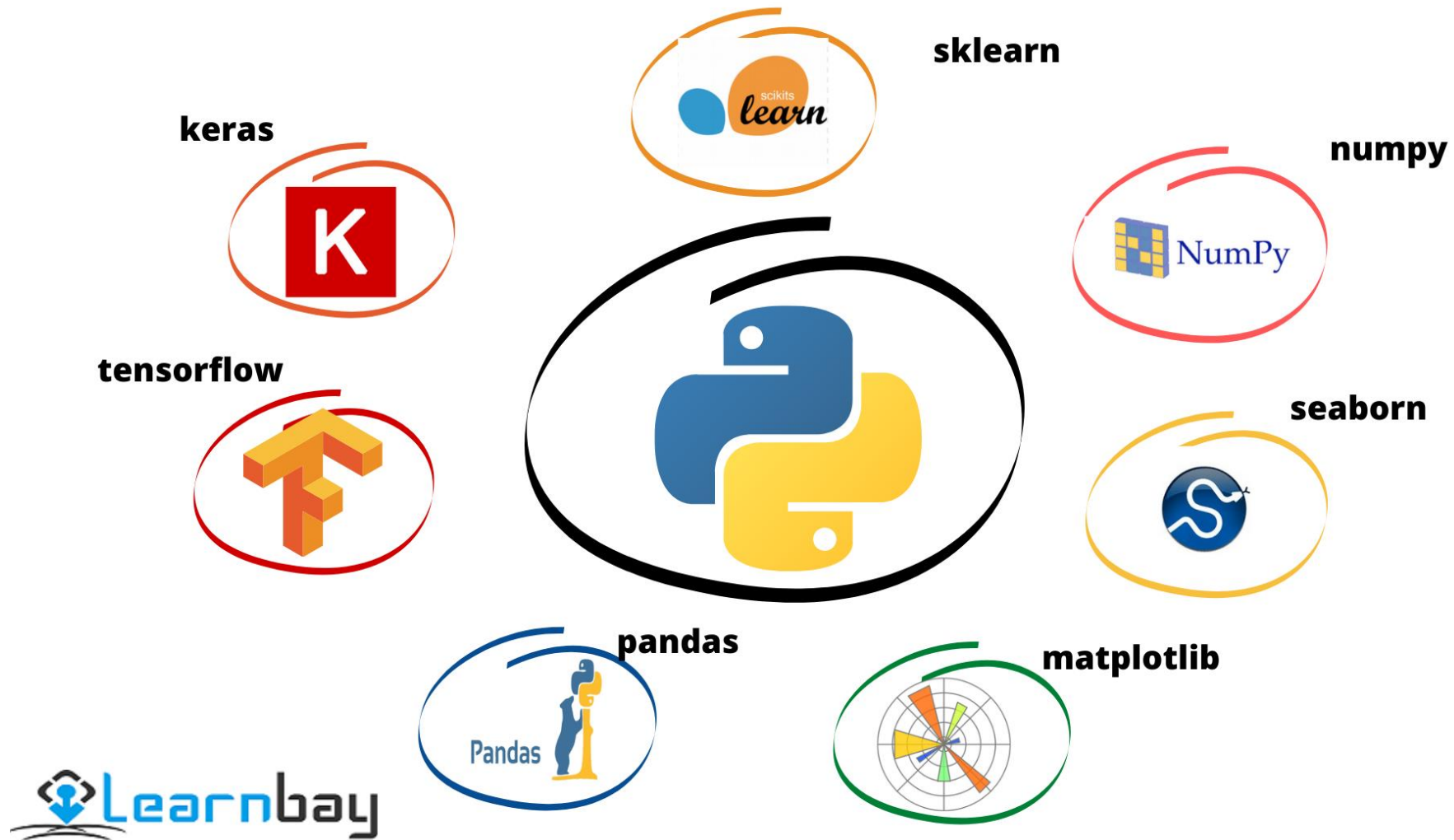


1. Basic Machine Learning: Data Loading

Oleh : Octika Adinda - Mentor

Goal

Python Libraries



Goal

To understand how to load and briefly process data with Pandas DataFrame

1. Load datasets
2. Explore data
3. Describe Data
4. Edit Data

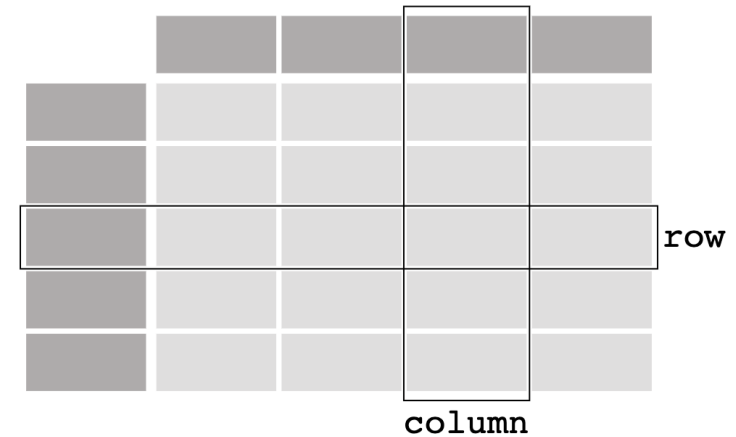


About Pandas

Pandas is a fast, powerful, flexible and easy to use open source data analysis and manipulation tool, built on top of the Python programming language.

pandas data table representation

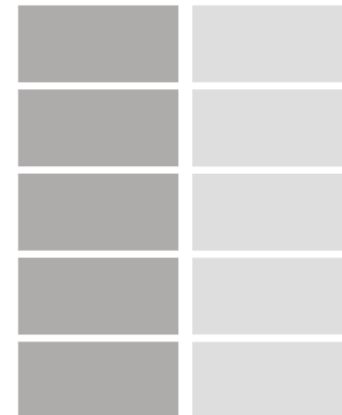
DataFrame



About Pandas

Each column in a DataFrame is a Series. When selecting a single column of a pandas DataFrame, the result is a pandas Series.

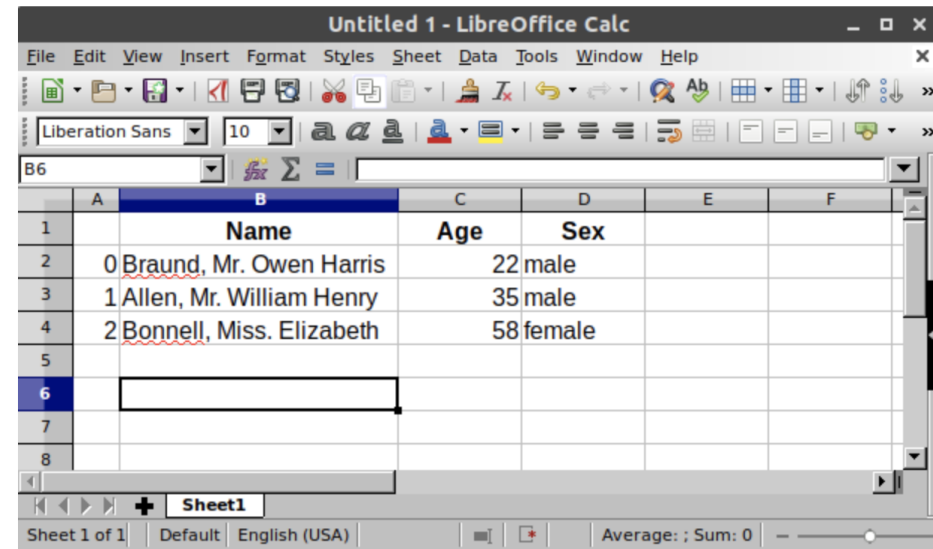
Series



About Pandas

A DataFrame is a 2-dimensional data structure that can store data of different types (including characters, integers, floating point values, categorical data and more) in columns. It is similar to a spreadsheet, a SQL table.

In spreadsheet software, the table representation of our data would look very similar:



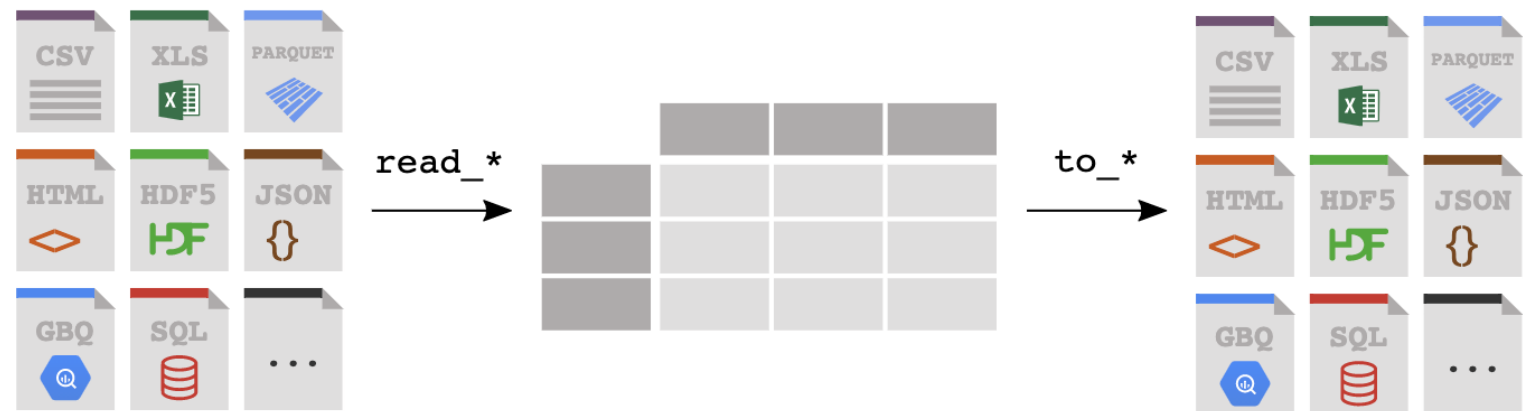
The screenshot shows a spreadsheet application window titled "Untitled 1 - LibreOffice Calc". The spreadsheet has a table with 3 columns: "Name", "Age", and "Sex". The data is as follows:

	Name	Age	Sex
0	Braund, Mr. Owen Harris	22	male
1	Allen, Mr. William Henry	35	male
2	Bonnell, Miss. Elizabeth	58	female

About Pandas

By using Pandas, we can work efficiently with the following type of tabular data:

1. CSV file
2. JSON file
3. Txt file
4. Excel file
5. Many others



About Pandas

By using Pandas, we can read and write the value of the tabular data such as selecting, editing and removing specific value of the specific columns and rows.

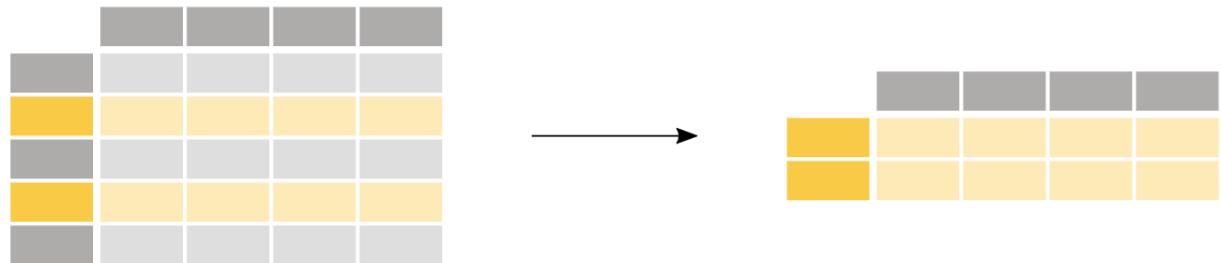
How do I select specific columns from a **DataFrame**?



About Pandas

By using Pandas, we can read and write the value of the tabular data such as selecting, editing and removing specific value of the specific columns and rows.

How do I filter specific rows from a **DataFrame**?



Thanks!