Machine Learning Engineer Course
Day5

- Basics of Machine Learning -

DIVE INTO CODE

Thursday 8th April 2021

DIOP Mouhamed

Check-in

3 minutes Please post the following point to Zoom chat.

Q. What do you want to know the most right now?
(Anything is fine.)

Agenda

1. Please Note
2. Today's word
3. Today's Objective
4. Review + ML & Scikit-Learn
5. Sample Code
6. ToDo by the next class

🚨 Please Note

How to proceed with this course and precautions
You will be the leader in the IT industry in Vietnam.

❶ Advance at top speed

We do not bottom up

❷ Promote autonomous self-propelled

We do not accept unexplained questions

❸ Focus on problem-solving ability

We do not give lectures on building up the foundation

Today's Word

Done is better than perfect

Mark Zuckerberg

Today's Objective

Purpose of learning. Purpose clarifies a person's role and the learning required. Clear learning leads to a sense of growth and confidence.

	Objective	NOT Objective
1	**Learn how to think about the program with your peers**	Memorize lots of functions
2	**Use the basic elements of the program**	Complete assignments quickly
3	**Feel like a fresh business person**	

Today's Objective

“Understanding the basics of machine learning”

What are the fundamentals of machine learning in the first place?
It is not about model building only.

- **Iterate the implementation and execution of the machine learning sequence**

Today's Objective

“Feel like a fresh business person”

This is an important attitude to keep in mind when using analysis tools. Try to have the following image.

- **I am a fresh business person**
  - ○ **No domain knowledge**
  - ○ **I have data**
- **Report, communicate, and consult with your seniors and superiors at work**
  - ○ **Have a business goal in mind**

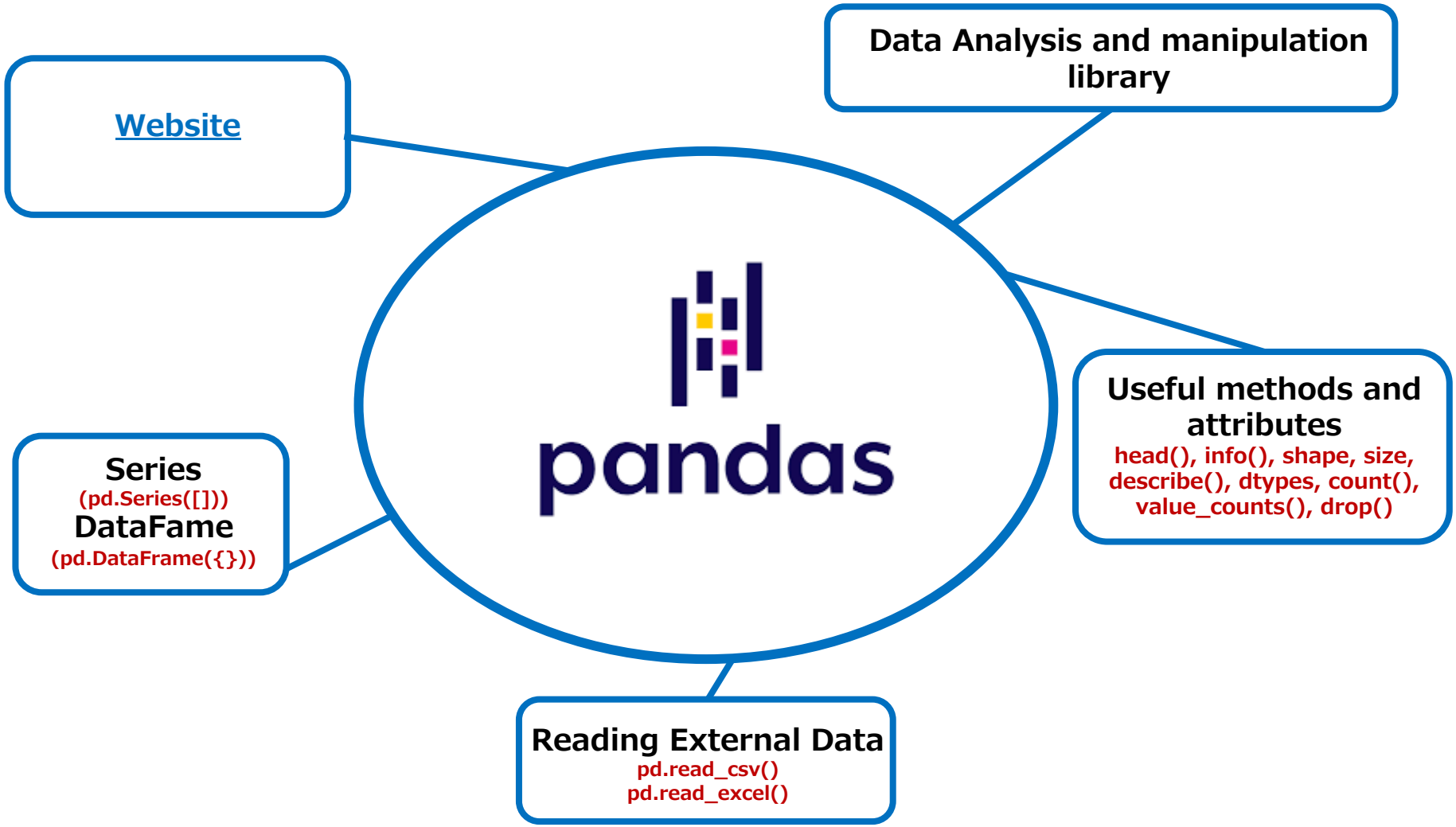
Today's Objective

How to solve problems

"Classification of irises"

[Problem 1] Select features and categories for practice
[Problem 2] Data analysis
[Problem 3] Division of preprocessing/training data and verification data
[Problem 4] Pretreatment/Standardization
[Problem 5] Learning and estimation
[Problem 6] Evaluation
[Problem 7] Visualization
[Problem 8] Learning by other methods
[Problem 9] (Advanced) Comparison with and without standardization
[Problem 10] (Advance) Highly accurate method using all objective variables

Quick Review (PANDAS)

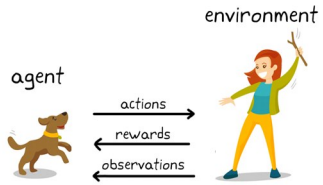


Machine Learning

The process of making a program which allows a computer to learn from data (could be anything, images – audio – texts)

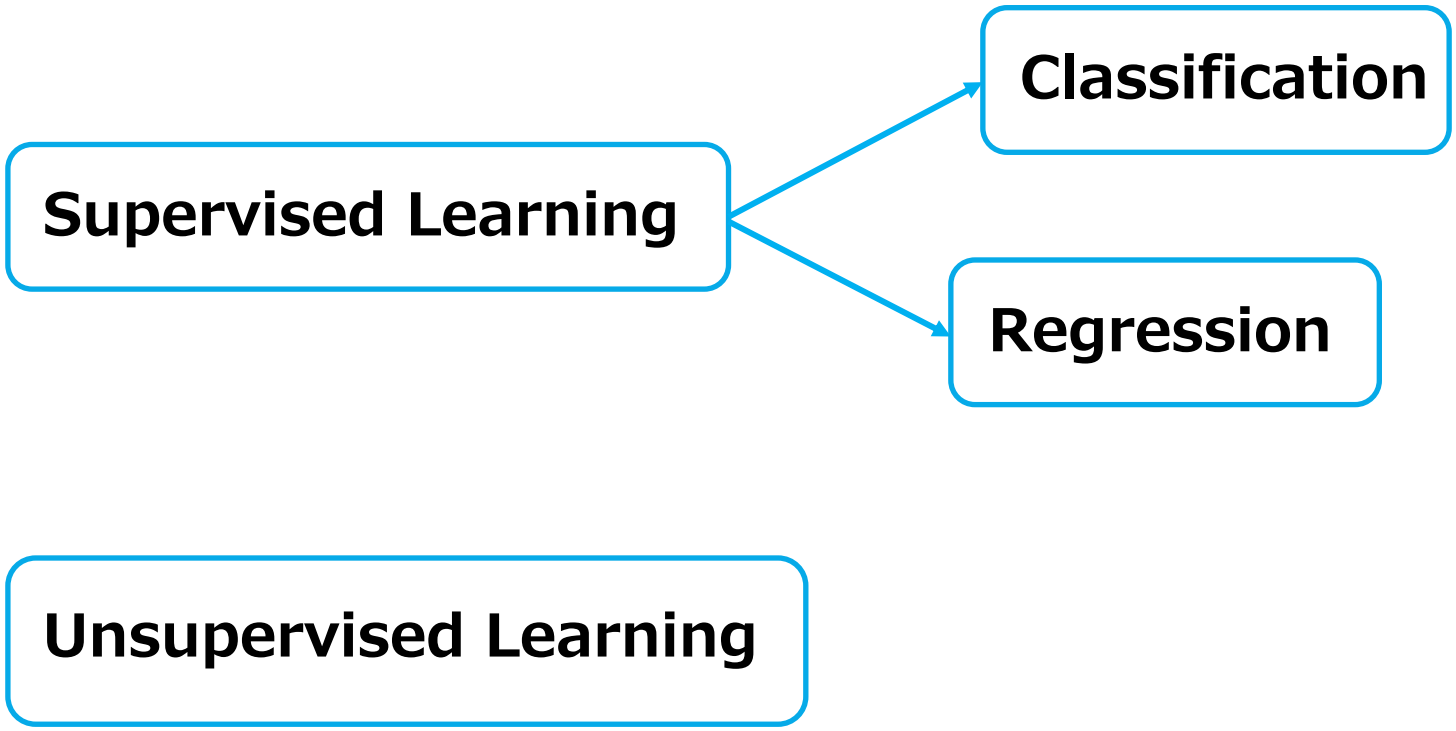
Common Use Cases

- **Computer Vision:** scanning documents using your phone's camera, making self-driving cars, image recognition (damages in products, cancer)
- **Natural Language Processing:** recognizing sounds
- **Reinforcement learning**

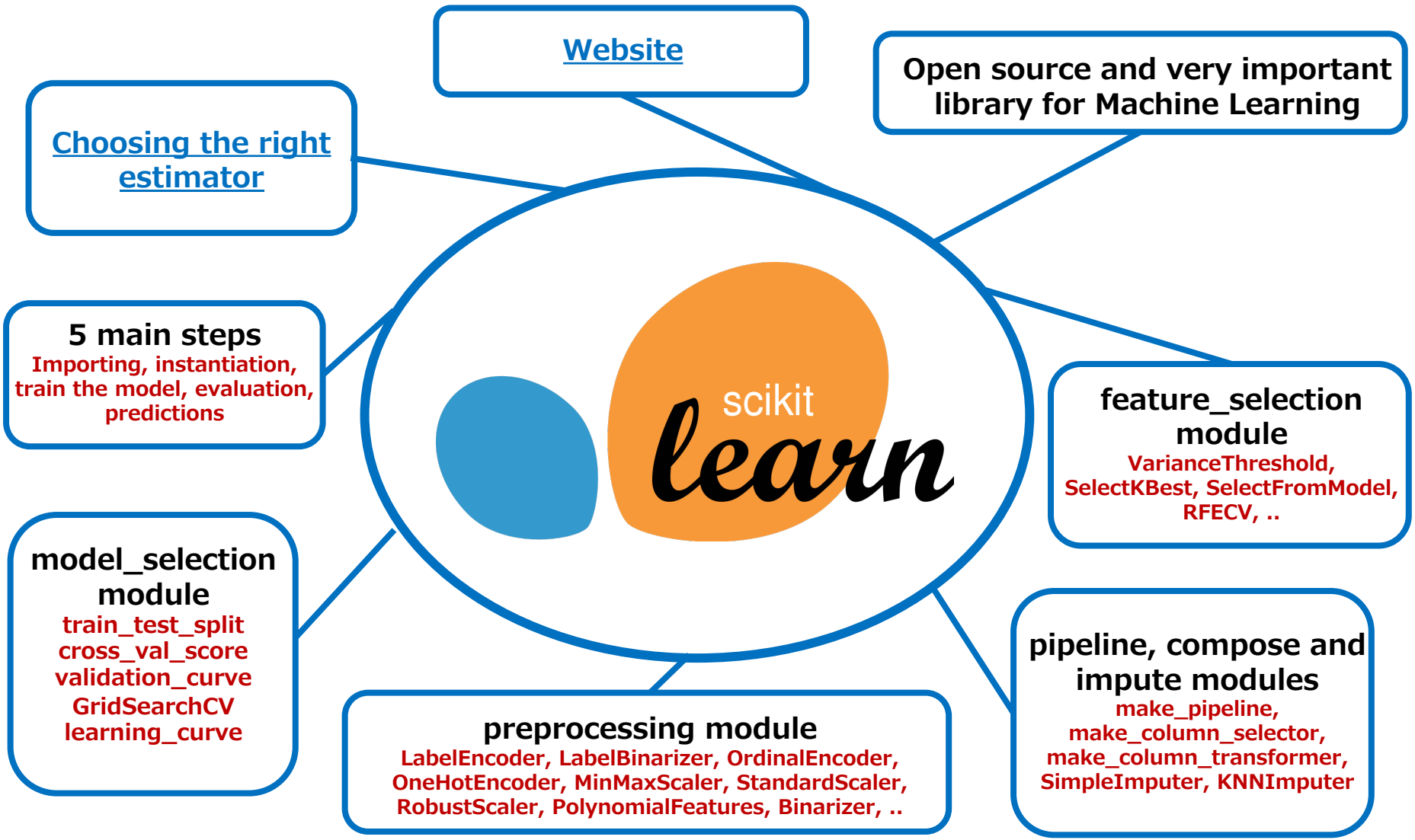


- **Recommendation Systems:** giving users recommendations

Machine Learning



Scikit-learn



Sample code

Explanations of the first assignment will be given.

1. Classification of irises

ToDo by the next class

Next class will be Zoom : Thursday 15 April 2021

🚨ToDo: Predicting House Prices
https://diver.diveintocode.jp/curriculums/1638

🚨ToDo: Utilization of Object Orientation
https://diver.diveintocode.jp/curriculums/1639

Check-out

3 minutes Please post the following point to Zoom chat.

Q. Current feelings and reflections
(joy, anger, sorrow, anticipation, nervousness, etc.)