Machine Learning Engineer Course
Day 9

- Introduction to Machine Learning Scratch -

DIVE INTO CODE

Thursday May 6, 2021

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Agenda

1. Check-in
2. How to proceed
3. Quick Review
4. ML Scratch
5. Train Test Split Class of Scikit-learn
6. Assignment
7. Scratch Train Test Split – Sample Code
8. Check-out

Check-in

3 minutes Please post the following point to Zoom chat.

Q. Are you capable of training a model based on both classification and regression problems?

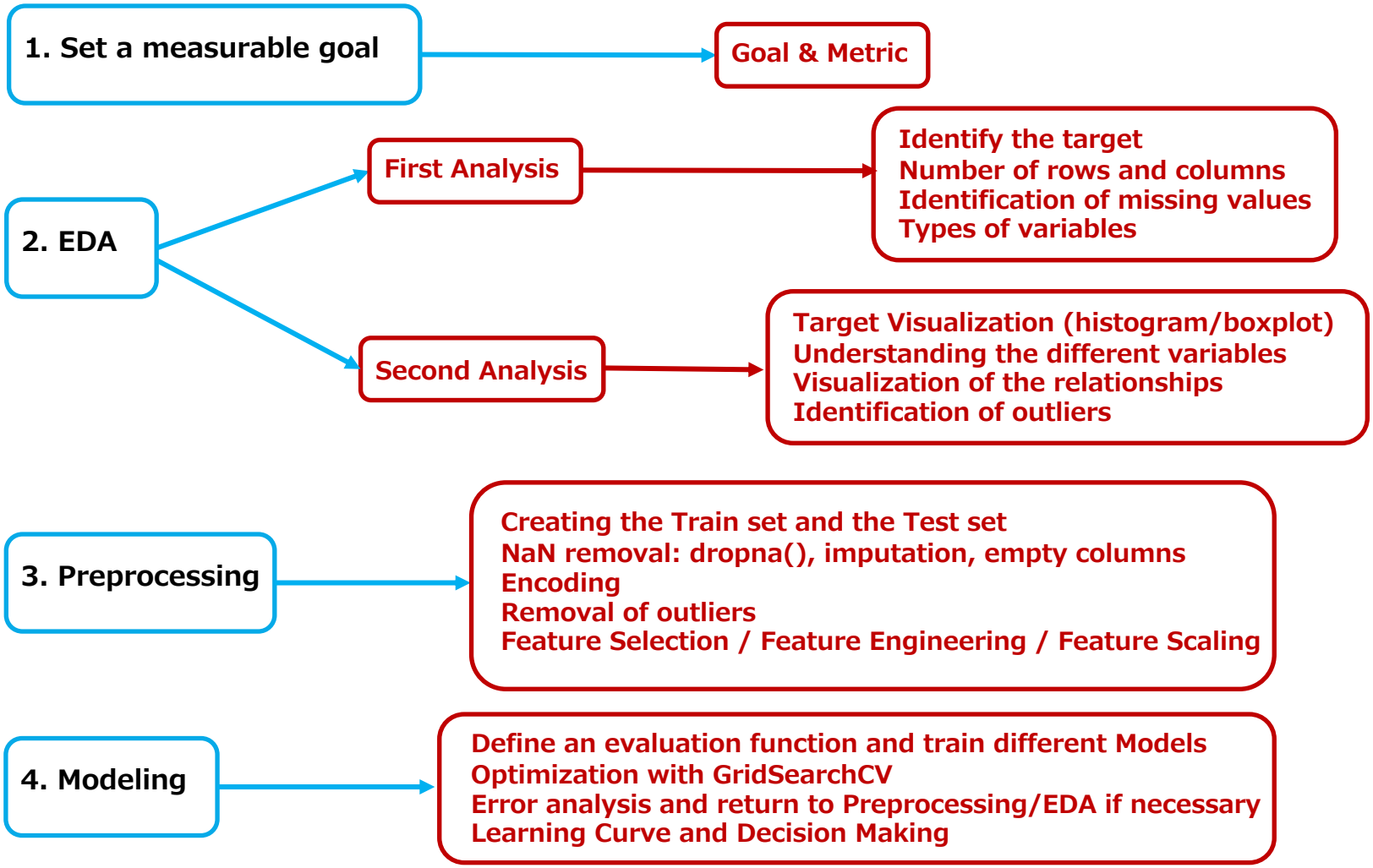
How to proceed

We encourage and facilitate learning together with the fundamentals in mind. This time, we will especially bring back the experience of learning together.

Objectives

1. **Learn how to think about the program with your peers**
2. **Use the basic elements of the program**
3. **Feel like a machine**

Quick Review (ML Flow)



Machine Learning Scratch

1. What is it about ?

It's about creating a class/function and make it work the same as the one you would import from the libraries.
We can take the example of the train_test_split class of scikit-learn that is in the model_selection module which you will be implementing from scratch in this SPRINT.

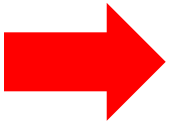
2. Why ?

- ✓ **Make it easier to understand the theory and mathematic formulas.**
- ✓ **Reducing ambiguity in using libraries**
- ✓ **Making existing implementations easier to read**
- ✓ **Improving your coding skills**
- ✓ **Deeper understanding of the algorithms**

Train and Test Split Class of scikit-learn

Let’s first have a look at the one used until now with the help of the scikit-learn library.

Scikit-learn’s train_test_split Class



Let’s use Google Colab. and the Iris dataset

Sprint 2 – Machine Learning Scratch

Explanation about this Sprint is given but please try it on your own first.

Sprint 2 – Machine Learning Scratch

Please work on your own after class and submit your assignments on DIVER.

Sprint 2 – Sample Code

A Sample Code of this Sprint is given but please try it on your own.

Sprint 2 – Machine Learning Scratch

Please work on your own after class and submit your assignments on DIVER.

ToDo by next class

Next class will be held on Zoom : Thursday 13 May 2021

🚨ToDo: Sprint 3 – Scratch Linear Regression
https://diver.diveintocode.jp/curriculums/1644

Check-out

3 minutes Please post the following point to Zoom chat.

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

Thank You For Your Attention