

M.L DLC

Machine Learning Development Life Cycle.

The MLDLC consist of following stages:

- 1> Data Collection: Collecting and preparing data for use in training and testing a machine learning model.
- 2> Data Preparation: Cleaning, preprocessing, and transforming the data into a format suitable for training model.
- 3> Model Selection: Selection an appropriate model architecture and training algorithm based on the problem data.
- 4> Model Training: Using the selected algorithm and data to train the model and optimize its performance
- 5> Model Evaluation: Testing the trained model on new data to evaluate its performance and identify any issues or areas for improvement.
- 6> Model Deployment: Deploying the model into a production environment or integrating it into an existing system.
- 7> Model Maintenance: Monitoring the model's performance over time and updating it as needed to address any issues or changes in the underlying data or problem domain

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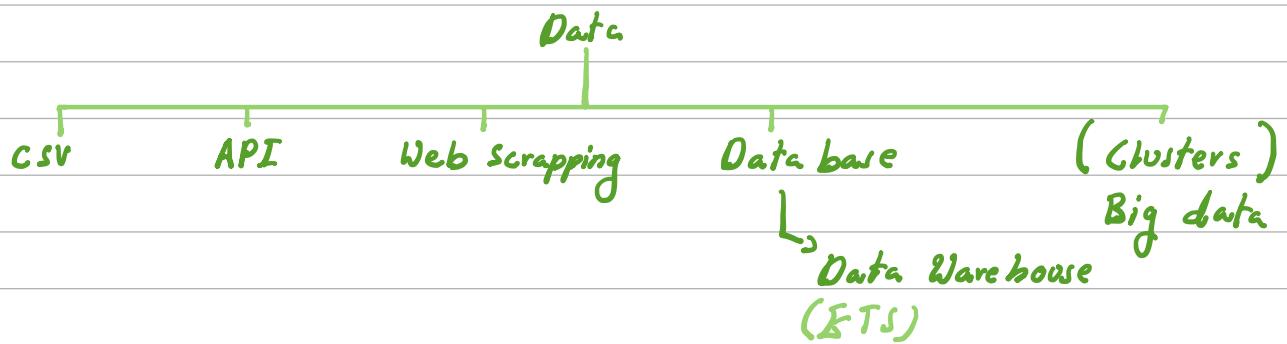
1> Framing the problem



We decide how problem needs to be solved. All the things are properly figured out.

2> Gathering Data:

The data is gathered from external sources. The data are collected in different types



3> Data Preprocessing :

The external source of data contains noises so we process the data removing duplicates, removing missing values, removing outliers, and scaling the values.

- Bring data in a format that it can be easily consumed by the ML model

4) Exploratory Data Analysis

Study the relation between Input and Output Variables

This stage give data insights by visualizing data and performing analysis to handle imbalance dataset

5) Feature Engineering and Selection.

Features are input columns.

Sometimes we create new columns in data by using existing columns in data to make analysis easier