

## Assignment no. 2

Title :- Find out missing data in dataset

Aim :- It is to understand and apply data - preprocessing concept

Software - Requirement :-

i) Minimum 16 +

ii) Python 3.9 +

iii) Anaconda Spider / Jupyter Notebook

Theory :- Missing data can occur when no information is provided for one or more items or for a whole unit. Missing data is a very big problem in real life scenarios. Missing data can also refer to the NA values in pandas. In data, missing data can also refer to dataset simply having missing data, either because it exists and was not collected or it never existed. For example, suppose different users being surveyed may choose not to share their income, some users may choose not to share address in this way many data - sets have missing. In pandas, missing data is represented by two values.

\* None : None is a python singleton object that is often used for missing data in python code.

\* NaN : NaN is a special floating point value recognized by all systems that use standard IEEE floating point representation.



pandas treat none and NaN as essentially interchangeable for indicating missing or null values. To facilitate this convention, there are several useful functions for detecting, removing and replacing null values in pandas data-frame.

- \* isnull()
- \* notnull()
- \* dropna()
- \* fillna()
- \* replace()
- \* interpolate()

checking for missing values isnull() and notnull()  
In order to check missing values in pandas dataframe, we use a function isnull() and notnull(). Both functions help in checking whether a value is NaN or not. These functions can also be used in pandas series in order to find null values in a series.

checking for missing values using isnull()  
In order to check null values in pandas dataframe, we use isnull() function. This function returns dataframe of boolean values which are True for NaN values.

conclusion:

Thus we have studied different methods to replace missing data in dataset.