

Data Acquisition

There are various formats for a dataset, .csv, .json, .xlsx etc. The dataset can be stored in different places, on your local machine or sometimes online. In this section, you will learn how to load a dataset into our Jupyter Notebook. In our case, the Automobile Dataset is an online source, and it is in CSV (comma separated value) format. Let's use this dataset as an example to practice data reading.

- data source: <https://archive.ics.uci.edu/ml/machine-learning-databases/autos/imports-85.data>
- data type: csv

The Pandas Library is a useful tool that enables us to read various datasets into a data frame; our Jupyter notebook platforms have a built-in **Pandas Library** so that all we need to do is import Pandas without installing.

```
In [1]: # import pandas library
import pandas as pd
import numpy as np
```

Read Data

We use `pandas.read_csv()` function to read the csv file. In the bracket, we put the file path along with a quotation mark, so that pandas will read the file into a data frame from that address. The file path can be either an URL or your local file address. Because the data does not include headers, we can add an argument `headers = None` inside the `read_csv()` method, so that pandas will not automatically set the first row as a header. You can also assign the dataset to any variable you create.

This dataset was hosted on IBM Cloud object storage for free storage.

```
In [2]: # Import pandas
import pandas as pd

# Read the online dataset
other_path = "https://archive.ics.uci.edu/ml/machine-learning-databases/autos/imports-85.data"
df = pd.read_csv(other_path)
```