```
import pandas as pd
from skimage.io import imshow
from skimage.io import imread
import matplotlib.pyplot as plt
```

Structured data

Transactional table

```
pd.read_excel("https://github.com/Tanxapol/CPE232-Data-Models/blob/main/Lab2/Train.xlsx?raw=true")
```

	ReportID	SalesPersonID	ProductID	Quantity	TotalSalesValue	Suspicious
0	Rep10101	C21116	PR6112	182	1665	indeterminate
1	Rep10102	C21116	PR6112	182	1740	indeterminate
2	Rep10103	C21116	PR6253	101	1040	indeterminate
3	Rep10104	C21116	PR6253	283	4495	No
4	Rep10105	C21116	PR6294	108	1465	indeterminate
...	...	...	...	...	...	...
42577	Rep52678	C22284	PR6600	2079	5380	indeterminate
42578	Rep52679	C22284	PR6486	116848	66210	indeterminate
42579	Rep52680	C22284	PR6600	1431	3975	indeterminate
42580	Rep52681	C22284	PR6600	9790	22370	indeterminate
42581	Rep52682	C22284	PR6600	9147	20155	indeterminate

42582 rows × 6 columns

Master table

```
pd.read_csv("https://github.com/Tanxapol/CPE232-Data-Models/blob/main/Lab2/marketing_campaign.csv?raw=true")
```

	ID\tYear_Birth\tEducation\tMarital_Status\tIncome\tKidhome\tTeenhome\tDt_Customer\tRecency\tMntWines\tMntFruits\tMntMeatProducts\tMntFishProducts\tMntSweetProducts\tMntGoldProds\tNu
0	
1	
2	
3	
4	
...	
2235	
2236	
2237	
2238	
2239	

2240 rows × 1 columns

Time series data

pd.read_csv("https://github.com/Tanxapol/CPE232-Data-Models/blob/main/Lab2/london_weather.csv?raw=true")

	date	cloud_cover	sunshine	global_radiation	max_temp	mean_temp	min_temp	precipitation	pressure	snow_depth
0	19790101	2.0	7.0	52.0	2.3	-4.1	-7.5	0.4	101900.0	9.0
1	19790102	6.0	1.7	27.0	1.6	-2.6	-7.5	0.0	102530.0	8.0
2	19790103	5.0	0.0	13.0	1.3	-2.8	-7.2	0.0	102050.0	4.0
3	19790104	8.0	0.0	13.0	-0.3	-2.6	-6.5	0.0	100840.0	2.0
4	19790105	6.0	2.0	29.0	5.6	-0.8	-1.4	0.0	102250.0	1.0
...	...	...	...	...	...	...	...	...	...	...
15336	20201227	1.0	0.9	32.0	7.5	7.5	7.6	2.0	98000.0	NaN
15337	20201228	7.0	3.7	38.0	3.6	1.1	-1.3	0.2	97370.0	NaN
15338	20201229	7.0	0.0	21.0	4.1	2.6	1.1	0.0	98830.0	NaN
15339	20201230	6.0	0.4	22.0	5.6	2.7	-0.1	0.0	100200.0	NaN
15340	20201231	7.0	1.3	34.0	1.5	-0.8	-3.1	0.0	100500.0	NaN

15341 rows × 10 columns

Graph/network data

pd.read_csv("https://github.com/Tanxapol/CPE232-Data-Models/blob/main/Lab2/edgelist.csv?raw=true")

	isForked	isTopContributor	repo_id	dev_id
0	False	True	0	0
1	False	True	1	0
2	False	True	2	0
3	False	True	3	0
4	True	NaN	4	2
...	...	...	...	...
3045	False	True	2949	1018
3046	True	True	2950	1018
3047	False	True	2951	1018
3048	False	True	2952	1019
3049	False	True	2953	1019

3050 rows × 4 columns

Crosstable data

pd.read_excel("https://github.com/Tanxapol/CPE232-Data-Models/blob/main/Lab2/IC-Household-Expense-Budget-Template-8540.xlsx?raw=true")

```
/usr/local/lib/python3.10/dist-packages/openpyxl/worksheet/_reader.py:329: UserWarning: Unknown extension is not supported and will be removed
  warn(msg)
```

	Unnamed: 0	HOUSEHOLD EXPENSE BUDGET TEMPLATE	Unnamed: 2	Unnamed: 3	Unnamed: 4
0	NaN	SUMMARY	BUDGET	ACTUAL	BALANCE
1	NaN	Total Income	7257	7020	237
2	NaN	Total Expenses	5359	2400	2959
3	NaN	NaN	NaN	NaN	NaN
4	NaN	NaN	BUDGET	ACTUAL	UNDER/OVER
...	...	...	...	...	...
81	NaN	NaN	1200	0	NaN
82	NaN	NaN	NaN	NaN	NaN
83	NaN	TOTAL	5359	2400	NaN
84	NaN	NaN	NaN	NaN	NaN
85	NaN	CLICK HERE TO CREATE IN SMARTSHEET	NaN	NaN	NaN

86 rows × 5 columns

Semi-Structured data

pd.read_json("https://github.com/ChotanansubSoph/COMCAMP-COM104/blob/main/Dataset/com104_unit3-5.json?raw=true")

	name	favorite	math_score	science_score	history	english_score	thai_score
0	พี่โชกุน	ภูขา	32	63	80	71	55
1	พี่ฟลุ๊ค	ปลาโลมา	74	83	60	75	75
2	พี่มาวิน	เพลงจี่หอย	81	54	55	82	91
3	พี่หมี	แมว	100	77	48	65	64
4	พี่โต	ความเกเร	85	52	70	80	54
5	พี่คัสซียะ	พี่โต	91	98	68	70	76

Unstructured data

```
img = imread('https://scontent.cdninstagram.com/v/t51.2885-19/412504740_661793035866988_3209056626744664835_n.jpg?stp=dst-jpg_s150x150&_nc_ht=scontent.cdninstagram.com&_nc_cat=104&_nc_ohc=SZL
imshow(img)
plt.axis('off')
plt.show()
```