

```
In [1]: pip install numpy
```

Defaulting to user installation because normal site-packages is not writeable
Requirement already satisfied: numpy in ./local/lib/python3.10/site-packages (1.24.1)
Note: you may need to restart the kernel to use updated packages.

```
In [2]: import numpy as np
import pandas as pd
```

```
In [3]: book=pd.read_csv('google_books_dataset.csv')
```

```
In [4]: book.head()
```

Unnamed: 0		title	authors	language	categories	averageRating	maturityRating		publisher	publishedDate	pageCount
0	0	Sammy Keyes and the Art of Deception	[Wendelin Van Draanen]	en	[Juvenile Fiction]	4.0	NOT_MATURE		Yearling	2009-01-16	304.0
1	1	Inward Journey	NaN	en	[Medical]	NaN	NOT_MATURE	Open Court Publishing Company		1983-01	133.0
2	2	The Boston Directory ...	NaN	en	[Boston]	NaN	NOT_MATURE		NaN	1865	NaN
3	3	Bring Your Own Devices (BYOD) Survival Guide	[Jessica Keyes]	en	[Business & Economics]	NaN	NOT_MATURE		CRC Press	2016-04-19	451.0
4	4	Enterprise 2.0	[Jessica Keyes]	en	[Business & Economics]	NaN	NOT_MATURE		CRC Press	2016-04-19	425.0

```
In [5]: book.describe()
```

	Unnamed: 0	averageRating	pageCount
count	1025.000000	167.000000	711.000000
mean	512.000000	3.937126	430.883263
std	296.036315	0.910414	443.426024
min	0.000000	1.000000	3.000000
25%	256.000000	3.500000	210.000000
50%	512.000000	4.000000	320.000000
75%	768.000000	4.500000	496.000000
max	1024.000000	5.000000	4976.000000

```
In [6]: book.isnull()
```

	Unnamed: 0	title	authors	language	categories	averageRating	maturityRating	publisher	publishedDate	pageCount
0	False	False	False	False	False	False	False	False	False	False
1	False	False	True	False	False	True	False	False	False	False
2	False	False	True	False	False	True	False	True	False	True
3	False	False	False	False	False	True	False	False	False	False
4	False	False	False	False	False	True	False	False	False	False
...
1020	False	False	False	False	False	True	False	True	False	False
1021	False	False	True	False	False	True	False	True	False	True
1022	False	False	False	False	False	True	False	True	False	True
1023	False	False	False	False	False	True	False	False	False	False
1024	False	False	True	False	False	True	False	True	False	True

1025 rows × 10 columns

```
In [7]: book.isnull().all()
```

```
Out[7]: Unnamed: 0      False
title      False
authors    False
language    False
categories  False
averageRating  False
maturityRating  False
publisher   False
publishedDate  False
pageCount   False
dtype: bool
```

```
In [8]: book.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1025 entries, 0 to 1024
Data columns (total 10 columns):
#   Column      Non-Null Count  Dtype
---  -
0   Unnamed: 0   1025 non-null  int64
1   title        1025 non-null  object
2   authors      767 non-null   object
3   language     1025 non-null  object
4   categories   908 non-null   object
5   averageRating 167 non-null   float64
6   maturityRating 1025 non-null  object
7   publisher    577 non-null   object
8   publishedDate 1007 non-null  object
9   pageCount    711 non-null   float64
dtypes: float64(2), int64(1), object(7)
memory usage: 80.2+ KB
```

```
In [9]: book.dropna(inplace = True)
```

```
In [ ]:
```

```
In [10]: book.dropna(inplace = True)
```

```
In [11]: book.isnull().sum()
```

```
Out[11]: Unnamed: 0      0
title      0
authors    0
language    0
categories  0
averageRating  0
maturityRating  0
publisher   0
publishedDate  0
pageCount   0
dtype: int64
```

```
In [12]: book.head()
```

Unnamed: 0		title	authors	language	categories	averageRating	maturityRating		publisher	publishedDate	pageCount
0	0	Sammy Keyes and the Art of Deception	[Wendelin Van Draanen]	en	[Juvenile Fiction]	4.0	NOT_MATURE		Yearling	2009-01-16	304.0
9	9	Classes on Modern Poets and the Art of Poetry	[James Dickey, 'Donald J. Greiner]	en	[Biography & Autobiography]	4.5	NOT_MATURE	Univ of South Carolina Press		2004-01	310.0
30	30	World War II: the Encyclopedia of the War Year...	[Norman Polmar, 'Thomas B. Allen]	en	[History]	1.0	NOT_MATURE	Courier Corporation		2012-08-15	940.0
33	33	American Predator	[Maureen Callahan]	en	[True Crime]	4.0	NOT_MATURE		Penguin	2019-07-02	304.0

