## Basic Analysis using numpy and pandas vehicle dataset

to import library

In [1]: import numpy as np
import pandas as pd

To import dataset

In [2]: d=pd.read\_csv(r"C:\Users\user\Downloads\2015.csv")
d

Out[2]:

Country	Region	Happiness Rank	Happiness Score	Standard Error	Economy (GDP per Capita)	Family	Health (Life Expectancy)	Fre	
Switzerland	Western Europe	1	7.587	0.03411	1.39651	1.34951	0.94143	0.	
Iceland	Western Europe	2	7.561	0.04884	1.30232	1.40223	0.94784	0.	
Denmark	Western Europe	3	7.527	0.03328	1.32548	1.36058	0.87464	0.	
Norway	Western Europe	4	7.522	0.03880	1.45900	1.33095	0.88521	0.	
Canada	North America	5	7.427	0.03553	1.32629	1.32261	0.90563	0.	
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Rwanda	Sub- Saharan Africa	154	3.465	0.03464	0.22208	0.77370	0.42864	0.:	
Benin	Sub- Saharan Africa	155	3.340	0.03656	0.28665	0.35386	0.31910	0.	
Syria	Middle East and Northern Africa	156	3.006	0.05015	0.66320	0.47489	0.72193	0.	
Burundi	Sub- Saharan Africa	157	2.905	0.08658	0.01530	0.41587	0.22396	0.	
Togo	Sub- Saharan Africa	158	2.839	0.06727	0.20868	0.13995	0.28443	0.:	
158 rows × 12 columns									
	Switzerland Iceland Denmark Norway Canada Rwanda Benin Syria Burundi Togo	Switzerland Western Europe Iceland Western Europe Denmark Western Europe Norway Western Europe Canada North America Rwanda Saharan Africa Benin Saharan Africa Syria Middle East and Northern Africa Burundi Saharan Africa Sub-Saharan Africa Syria Sub-Saharan Africa Syria Sub-Saharan Africa	Switzerland Western Europe 1  Iceland Western Europe 2  Denmark Western Europe 3  Norway Western Europe 4  Canada North America 5   Sub-Rwanda Saharan Africa  155  Benin Saharan Africa  156  Middle East and Northern Africa  156  Sub-Burundi Saharan 157  Africa  156  Burundi Saharan 157  Africa  157  Sub-Burundi Saharan 157  Africa  157	Switzerland         Western Europe         1         7.587           Iceland         Western Europe         2         7.561           Denmark         Western Europe         3         7.527           Norway         Western Europe         4         7.522           Canada         North America         5         7.427                 Rwanda         Saharan Africa         154         3.465           Benin         Saharan Africa         155         3.340           Benin         Saharan Africa         156         3.006           Northern Africa         157         2.905           Burundi         Saharan Africa         157         2.905           Togo         Saharan Africa         158         2.839	Country         Region         Rank         Score         Error           Switzerland         Western Europe         1         7.587         0.03411           Iceland         Western Europe         2         7.561         0.04884           Denmark         Western Europe         3         7.527         0.03328           Norway         Western Europe         4         7.522         0.03880           Canada         North America         5         7.427         0.03553                  Rwanda         Sub-Saharan Africa         154         3.465         0.03464           Benin         Sub-Saharan Africa         155         3.340         0.03656           Syria         Middle East and Northern Africa         156         3.006         0.05015           Burundi         Sub-Saharan Africa         157         2.905         0.08658           Togo         Saharan Africa         158         2.839         0.06727	Country         Region         Happiness Rank         Score Score         Error Error Error Capital           Switzerland         Western Europe         1         7.587         0.03411         1.39651           Iceland         Western Europe         2         7.561         0.04884         1.30232           Denmark         Western Europe         3         7.527         0.03328         1.32548           Norway         Western Europe         4         7.522         0.03880         1.45900           Canada         North America         5         7.427         0.03553         1.32629                   Rwanda         Sabaran Africa         154         3.465         0.03464         0.22208           Benin         Sabaran Africa         155         3.340         0.03656         0.28665           Syria         Middle East and Northern Africa         156         3.006         0.05015         0.66320           Burundi         Sabaran Africa         157         2.905         0.08658         0.01530           Togo         Saharan Africa         158         2.839         0.06727         0.20868	Country         Region         Happiness Rank         Score Score Score         Error Error (GDP per Capita)         Family           Switzerland         Western Europe         1         7.587         0.03411         1.39651         1.34951           Iceland         Western Europe         2         7.561         0.04884         1.30232         1.40223           Denmark         Western Europe         3         7.527         0.03328         1.32548         1.36058           Norway         Western Europe         4         7.522         0.03880         1.45900         1.33095           Canada         North America         5         7.427         0.03553         1.32629         1.32261                    Rwanda         Sub-Saharan Africa         154         3.465         0.03464         0.22208         0.77370           Benin         Sub-Saharan Africa         155         3.340         0.03656         0.28665         0.35386           Syria         Middle East and Northern Africa         156         3.006         0.05015         0.66320         0.47489           Burundi         Saharan Africa         157         2.9	Country         Region         Asplites Rank         Score         Error Error Capital         GDP per Capital         Family Expectancy           Switzerland         Western Europe         1         7.587         0.03411         1.39651         1.34951         0.94143           Denmark         Western Europe         2         7.561         0.04884         1.30232         1.40223         0.94784           Norway         Western Europe         3         7.527         0.03328         1.32548         1.36058         0.87464           Norway         Western Europe         4         7.522         0.03880         1.45900         1.33095         0.88521           Canada         North America         5         7.427         0.03553         1.32629         1.32261         0.90563           Rwanda         Sub-Saharan Africa         154         3.465         0.03464         0.22208         0.77370         0.42864           Benin         Sub-Saharan Africa         155         3.340         0.03656         0.28665         0.35386         0.31910           Syria         Middle East and Africa         156         3.006         0.05015         0.66320         0.47489         0.72193           Burundi         Sub-Sahara	

In [3]: d.head(10)

Out[3]:

	Country	Region	Happiness Rank	Happiness Score	Standard Error	Economy (GDP per Capita)	Family	Health (Life Expectancy)	Freed
0	Switzerland	Western Europe	1	7.587	0.03411	1.39651	1.34951	0.94143	0.66
1	Iceland	Western Europe	2	7.561	0.04884	1.30232	1.40223	0.94784	0.62
2	Denmark	Western Europe	3	7.527	0.03328	1.32548	1.36058	0.87464	0.64
3	Norway	Western Europe	4	7.522	0.03880	1.45900	1.33095	0.88521	0.66
4	Canada	North America	5	7.427	0.03553	1.32629	1.32261	0.90563	0.63
5	Finland	Western Europe	6	7.406	0.03140	1.29025	1.31826	0.88911	0.64
6	Netherlands	Western Europe	7	7.378	0.02799	1.32944	1.28017	0.89284	0.61
7	Sweden	Western Europe	8	7.364	0.03157	1.33171	1.28907	0.91087	0.65
8	New Zealand	Australia and New Zealand	9	7.286	0.03371	1.25018	1.31967	0.90837	0.63
9	Australia	Australia and New Zealand	10	7.284	0.04083	1.33358	1.30923	0.93156	0.65
4									•

In [4]: d.tail(10)

Out[4]:

	Country	Region	Happiness Rank	Happiness Score	Standard Error	Economy (GDP per Capita)	Family	Health (Life Expectancy)	Fre
148	Chad	Sub- Saharan Africa	149	3.667	0.03830	0.34193	0.76062	0.15010	0
149	Guinea	Sub- Saharan Africa	150	3.656	0.03590	0.17417	0.46475	0.24009	0
150	Ivory Coast	Sub- Saharan Africa	151	3.655	0.05141	0.46534	0.77115	0.15185	0
151	Burkina Faso	Sub- Saharan Africa	152	3.587	0.04324	0.25812	0.85188	0.27125	0
152	Afghanistan	Southern Asia	153	3.575	0.03084	0.31982	0.30285	0.30335	0
153	Rwanda	Sub- Saharan Africa	154	3.465	0.03464	0.22208	0.77370	0.42864	0
154	Benin	Sub- Saharan Africa	155	3.340	0.03656	0.28665	0.35386	0.31910	0
155	Syria	Middle East and Northern Africa	156	3.006	0.05015	0.66320	0.47489	0.72193	0
156	Burundi	Sub- Saharan Africa	157	2.905	0.08658	0.01530	0.41587	0.22396	0
157	Togo	Sub- Saharan Africa	158	2.839	0.06727	0.20868	0.13995	0.28443	0
4									•

In [5]: d.describe()

Out[5]:

	Happiness Rank	Happiness Score	Standard Error	Economy (GDP per Capita)	Family	Health (Life Expectancy)	Freedom	(Gr C
count	158.000000	158.000000	158.000000	158.000000	158.000000	158.000000	158.000000	1
mean	79.493671	5.375734	0.047885	0.846137	0.991046	0.630259	0.428615	
std	45.754363	1.145010	0.017146	0.403121	0.272369	0.247078	0.150693	
min	1.000000	2.839000	0.018480	0.000000	0.000000	0.000000	0.000000	
25%	40.250000	4.526000	0.037268	0.545808	0.856823	0.439185	0.328330	
50%	79.500000	5.232500	0.043940	0.910245	1.029510	0.696705	0.435515	
75%	118.750000	6.243750	0.052300	1.158448	1.214405	0.811013	0.549092	
max	158.000000	7.587000	0.136930	1.690420	1.402230	1.025250	0.669730	
4								•

In [6]: np.shape(d)

Out[6]: (158, 12)

To get the missing value

In [7]: d.isna()

Out[7]:

	Country	Region	Happiness Rank	Happiness Score	Standard Error	Economy (GDP per Capita)	Family	Health (Life Expectancy)	Freedon
0	False	False	False	False	False	False	False	False	Fals
1	False	False	False	False	False	False	False	False	Fals
2	False	False	False	False	False	False	False	False	Fals
3	False	False	False	False	False	False	False	False	Fals
4	False	False	False	False	False	False	False	False	Fals
153	False	False	False	False	False	False	False	False	Fals
154	False	False	False	False	False	False	False	False	Fals
155	False	False	False	False	False	False	False	False	Fals
156	False	False	False	False	False	False	False	False	Fals
157	False	False	False	False	False	False	False	False	False

158 rows × 12 columns

In [8]: d.fillna(value=5)

Out[8]:

	Country	Region	Happiness Rank	Happiness Score	Standard Error	Economy (GDP per Capita)	Family	Health (Life Expectancy)	Fre	
0	Switzerland	Western Europe	1	7.587	0.03411	1.39651	1.34951	0.94143	0.	
1	Iceland	Western Europe	2	7.561	0.04884	1.30232	1.40223	0.94784	0.	
2	Denmark	Western Europe	3	7.527	0.03328	1.32548	1.36058	0.87464	0.	
3	Norway	Western Europe	4	7.522	0.03880	1.45900	1.33095	0.88521	0.	
4	Canada	North America	5	7.427	0.03553	1.32629	1.32261	0.90563	0.	
153	Rwanda	Sub- Saharan Africa	154	3.465	0.03464	0.22208	0.77370	0.42864	0.:	
154	Benin	Sub- Saharan Africa	155	3.340	0.03656	0.28665	0.35386	0.31910	0.	
155	Syria	Middle East and Northern Africa	156	3.006	0.05015	0.66320	0.47489	0.72193	0.	
156	Burundi	Sub- Saharan Africa	157	2.905	0.08658	0.01530	0.41587	0.22396	0.	
157	Togo	Sub- Saharan Africa	158	2.839	0.06727	0.20868	0.13995	0.28443	0.:	
158 r	158 rows × 12 columns									

158 rows × 12 columns

In [ ]: