Shark_Tank_India_Analysis

May 16, 2024

[1]:
```
#importing required libraries
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
```

[2]:
```
#Getting the dataset
data = pd.read_csv('/content/drive/MyDrive/Computers/Python/Datasets for data analysis/Shark Tank India/Shark Tank India.csv')
```

[3]:
```
#Setting max rows and columns
pd.options.display.max_rows = 500
pd.options.display.max_columns = 100
```

[4]:
```
#Understanding the data
print(data.head())
```

```
   Season Number      Startup Name  Episode Number  Pitch Number Season Start  \
0              1     BluePineFoods               1             1    20-Dec-21
1              1      BoozScooters               1             2    20-Dec-21
2              1  HeartUpMySleeves               1             3    20-Dec-21
3              1         TagzFoods               2             4    20-Dec-21
4              1      HeadAndHeart               2             5    20-Dec-21

  Season End Original Air Date                Episode Title           Anchor  \
0   4-Feb-22         20-Dec-21  Badlegi Business Ki Tasveer  Rannvijay Singh
1   4-Feb-22         20-Dec-21  Badlegi Business Ki Tasveer  Rannvijay Singh
2   4-Feb-22         20-Dec-21  Badlegi Business Ki Tasveer  Rannvijay Singh
3   4-Feb-22         21-Dec-21      Insaan, Ideas Aur Sapne  Rannvijay Singh
4   4-Feb-22         21-Dec-21      Insaan, Ideas Aur Sapne  Rannvijay Singh

                      Industry  \
0                         Food
1  Vehicles/Electrical Vehicles
2                Beauty/Fashion
3                         Food
4                    Education
```

	Business Description	Company Website	Started in	Number of Presenters	Male Presenters	Female Presenters	Transgender Presenters	Couple Presenters	Pitchers Average Age	Pitchers City	Pitchers State	Yearly Revenue	Monthly Sales	Gross Margin	Net Margin	EBITDA	Cash Burn	SKUs	Has Patents	Bootstrapped	Original Ask Amount	Original Offered Equity	Valuation Requested	Received Offer
0	Frozen Momos	https://bluepinefoods.com/	2016.0	3	2.0	1.0	NaN	0.0	Middle	Delhi	Delhi	95.0	8.0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	50.0	5.0	1000.0	1
1	Renting e-bike for mobility in private spaces	https://www.boozup.net/	2017.0	1	1.0	NaN	NaN	0.0	Young	Ahmedabad	Gujarat	4.0	0.4	NaN	NaN	NaN	NaN	NaN	NaN	NaN	40.0	15.0	267.0	1
2	Detachable Sleeves	https://heartupmysleeves.com/	2021.0	1	NaN	1.0	NaN	0.0	Young	Delhi	Delhi	NaN	2.0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	25.0	10.0	250.0	1
3	Healthy Potato Chips Snacks	https://tagzfoods.com/	2019.0	2	2.0	NaN	NaN	0.0	Middle	Bangalore	Karnataka	700.0	NaN	48.0	NaN	NaN	NaN	NaN	NaN	NaN	70.0	1.0	7000.0	1
4	Brain Development Course	https://thehnh.in/	2015.0	4	1.0	3.0	NaN	1.0	Middle	Patiala	Punjab	30.0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	50.0	5.0	1000.0	0

	Accepted Offer	Total Deal Amount	Total Deal Equity	Total Deal Debt
0	1.0	75.0	16.00	NaN
1	1.0	40.0	50.00	NaN
2	1.0	25.0	30.00	NaN
3	1.0	70.0	2.75	NaN
4	NaN	NaN	NaN	NaN

	Debt Interest	Deal Valuation	Number of Sharks in Deal
0	NaN	469.0	3.0
1	NaN	80.0	2.0
2	NaN	83.0	2.0
3	NaN	2545.0	1.0
4	NaN	NaN	NaN

	Deal Has Conditions	Royalty Deal	Advisory Shares Equity
0	NaN	NaN	NaN
1	NaN	NaN	NaN
2	NaN	NaN	NaN
3	NaN	NaN	NaN
4	NaN	NaN	NaN

	Namita Investment Amount	Namita Investment Equity	Namita Debt Amount
0	NaN	NaN	NaN
1	NaN	NaN	NaN
2	NaN	NaN	NaN
3	NaN	NaN	NaN
4	NaN	NaN	NaN

	Vineeta Investment Amount	Vineeta Investment Equity	Vineeta Debt Amount
0	25.0	5.33	NaN
1	20.0	25.00	NaN
2	12.5	15.00	NaN
3	NaN	NaN	NaN
4	NaN	NaN	NaN

	Anupam Investment Amount	Anupam Investment Equity	Anupam Debt Amount
0	NaN	NaN	NaN
1	NaN	NaN	NaN
2	12.5	15.0	NaN
3	NaN	NaN	NaN
4	NaN	NaN	NaN

	Aman Investment Amount	Aman Investment Equity	Aman Debt Amount
0	25.0	5.33	NaN
1	NaN	NaN	NaN
2	NaN	NaN	NaN
3	NaN	NaN	NaN

```
4                    NaN                    NaN               NaN

   Peyush Investment Amount  Peyush Investment Equity  Peyush Debt Amount  \
0                       NaN                       NaN                 NaN
1                       NaN                       NaN                 NaN
2                       NaN                       NaN                 NaN
3                       NaN                       NaN                 NaN
4                       NaN                       NaN                 NaN

   Amit Investment Amount  Amit Investment Equity  Amit Debt Amount  \
0                     NaN                     NaN               NaN
1                     NaN                     NaN               NaN
2                     NaN                     NaN               NaN
3                     NaN                     NaN               NaN
4                     NaN                     NaN               NaN

   Ashneer Investment Amount  Ashneer Investment Equity  Ashneer Debt Amount  \
0                       25.0                       5.33                  NaN
1                       20.0                      25.00                  NaN
2                        NaN                        NaN                  NaN
3                       70.0                       2.75                  NaN
4                        NaN                        NaN                  NaN

   Guest Investment Amount  Guest Investment Equity  Guest Debt Amount  \
0                     NaN                     NaN               NaN
1                     NaN                     NaN               NaN
2                     NaN                     NaN               NaN
3                     NaN                     NaN               NaN
4                     NaN                     NaN               NaN

  Invested Guest Name All Guest Names  Namita Present  Vineeta Present  \
0                 NaN             NaN             1.0              1.0
1                 NaN             NaN             1.0              1.0
2                 NaN             NaN             1.0              1.0
3                 NaN             NaN             1.0              1.0
4                 NaN             NaN             1.0              1.0

   Anupam Present  Aman Present  Peyush Present  Amit Present  \
0             1.0           1.0             NaN           NaN
1             1.0           1.0             NaN           NaN
2             1.0           1.0             NaN           NaN
3             1.0           1.0             NaN           NaN
4             1.0           1.0             NaN           NaN

   Ashneer Present  Guest Present
0              1.0            NaN
1              1.0            NaN
2              1.0            NaN
```

```
3              1.0            NaN
4              1.0            NaN
```

[5]:
```
#Getting the statistical info about the data
data.describe()
```

[5]:
```
       Season Number  Episode Number  Pitch Number   Started in  \
count     478.000000      478.000000    478.000000   355.000000
mean        2.010460       23.182008    239.500000  2018.904225
std         0.804791       15.028357    138.130976     2.770274
min         1.000000        0.000000      1.000000  1998.000000
25%         1.000000       10.000000    120.250000  2018.000000
50%         2.000000       23.000000    239.500000  2019.000000
75%         3.000000       35.000000    358.750000  2021.000000
max         3.000000       52.000000    478.000000  2023.000000

       Number of Presenters  Male Presenters  Female Presenters  \
count            478.000000       412.000000         226.000000
mean               2.020921         1.679612           1.199115
std                0.821349         0.819039           0.421847
min                1.000000         1.000000           1.000000
25%                1.000000         1.000000           1.000000
50%                2.000000         1.000000           1.000000
75%                2.000000         2.000000           1.000000
max                6.000000         6.000000           3.000000

       Transgender Presenters  Couple Presenters  Yearly Revenue  \
count                     3.0         473.000000      241.000000
mean                      1.0           0.177590      557.033195
std                       0.0           0.382572     1501.919516
min                       1.0           0.000000        0.000000
25%                       1.0           0.000000       72.000000
50%                       1.0           0.000000      170.000000
75%                       1.0           0.000000      460.000000
max                       1.0           1.000000    18700.000000

       Monthly Sales  Gross Margin  Net Margin     EBITDA         SKUs  \
count     225.000000    129.000000   73.000000  23.000000    28.000000
mean       68.917253     54.953488   20.575342  10.608696   330.678571
std       250.631067     21.059017   12.187104  12.822172  1137.602256
min         0.000000      3.000000    1.000000 -20.000000     1.000000
25%         6.000000     40.000000   10.000000   5.000000     9.000000
50%        21.000000     56.000000   20.000000  10.000000    22.500000
75%        60.000000     70.000000   30.000000  18.500000    95.000000
max      3500.000000    150.000000   55.000000  35.000000  6000.000000

       Original Ask Amount  Original Offered Equity  Valuation Requested  \
```

count	478.000000	478.000000	478.000000
mean	144.451284	3.811987	5245.346384
std	1370.241566	3.797043	8892.492491
min	0.000000	0.200000	0.000000
25%	50.000000	1.212500	1000.000000
50%	75.000000	2.500000	2857.071428
75%	100.000000	5.000000	6000.000000
max	30000.000000	30.000000	120000.000000

	Received Offer	Accepted Offer	Total Deal Amount	Total Deal Equity	\
count	478.000000	321.000000	268.000000	268.000000	
mean	0.671548	0.834891	66.177663	8.278694	
std	0.470142	0.371859	43.314939	9.366814	
min	0.000000	0.000000	0.000000	0.500000	
25%	0.000000	1.000000	40.000000	2.500000	
50%	1.000000	1.000000	56.300000	5.000000	
75%	1.000000	1.000000	90.000000	10.000000	
max	1.000000	1.000000	300.000000	75.000000	

	Total Deal Debt	Debt Interest	Deal Valuation	\
count	62.000000	45.000000	267.000000	
mean	46.225806	10.511111	2280.644650	
std	26.245636	3.314035	3435.328410	
min	20.000000	0.000000	0.000000	
25%	25.000000	10.000000	500.000000	
50%	40.000000	10.000000	1107.692308	
75%	50.000000	12.000000	2500.000000	
max	150.000000	18.000000	25000.000000	

	Number of Sharks in Deal	Royalty Deal	Advisory Shares Equity	\
count	268.000000	17.0	3.000000	
mean	2.011194	1.0	1.533333	
std	1.149770	0.0	0.950438	
min	1.000000	1.0	0.600000	
25%	1.000000	1.0	1.050000	
50%	2.000000	1.0	1.500000	
75%	3.000000	1.0	2.000000	
max	5.000000	1.0	2.500000	

	Namita Investment Amount	Namita Investment Equity	Namita Debt Amount	\
count	89.000000	89.000000	17.000000	
mean	32.942025	3.934479	36.332941	
std	20.584949	5.116032	22.085984	
min	0.000016	0.200000	10.000000	
25%	20.000000	1.000000	20.000000	
50%	26.660000	2.000000	35.000000	
75%	45.000000	5.000000	50.000000	

```
max                  100.000000                  25.000000          100.000000

       Vineeta Investment Amount  Vineeta Investment Equity  \
count                  68.000000                  68.000000
mean                   31.246507                   4.162559
std                    20.795928                   4.706656
min                     0.002500                   0.200000
25%                    19.415000                   1.000000
50%                    25.000000                   2.500000
75%                    40.000000                   5.000000
max                   100.000000                  25.000000

       Vineeta Debt Amount  Anupam Investment Amount  \
count            12.000000                 75.000000
mean             24.513333                 29.593104
std              13.434905                 21.221572
min              12.500000                  0.000000
25%              14.375000                 18.750000
50%              20.000000                 25.000000
75%              30.000000                 40.000000
max              50.000000                100.000000

       Anupam Investment Equity  Anupam Debt Amount  Aman Investment Amount  \
count                 75.000000            8.00000              109.000000
mean                   4.612107           26.87500               33.868830
std                    5.273910           14.92541               24.134884
min                    0.166000           12.50000                0.000000
25%                    1.000000           16.87500               17.660000
50%                    2.250000           22.50000               30.000000
75%                    5.500000           31.25000               45.000000
max                   25.000000           50.00000              150.000000

       Aman Investment Equity  Aman Debt Amount  Peyush Investment Amount  \
count              109.000000         18.000000                 89.000000
mean                 3.069473         37.656667                 34.667222
std                  4.384031         21.579428                 30.122765
min                  0.166000         10.000000                  0.000000
25%                  1.000000         21.250000                 20.000000
50%                  2.000000         34.750000                 28.000000
75%                  4.000000         47.915000                 45.000000
max                 40.000000         80.000000                250.000000

       Peyush Investment Equity  Peyush Debt Amount  Amit Investment Amount  \
count                 89.000000           12.000000               35.000000
mean                   5.667764           30.583333               35.268571
std                   10.834254           14.724490               26.540778
min                    0.166000           10.000000                3.500000
```

25%	1.000000	24.250000	15.830000
50%	2.000000	25.000000	25.000000
75%	5.000000	35.000000	50.000000
max	75.000000	60.000000	100.000000

	Amit Investment Equity	Amit Debt Amount	Ashneer Investment Amount	\
count	35.000000	7.000000	21.000000	
mean	4.287046	35.000000	25.682381	
std	4.713601	18.257419	16.860620	
min	0.330000	10.000000	1.000000	
25%	1.375000	22.500000	15.000000	
50%	2.500000	40.000000	20.000000	
75%	5.000000	42.500000	30.000000	
max	20.000000	65.000000	70.000000	

	Ashneer Investment Equity	Ashneer Debt Amount	\
count	21.000000	2.00000	
mean	4.440000	57.00000	
std	5.065662	59.39697	
min	1.000000	15.00000	
25%	2.000000	36.00000	
50%	3.000000	57.00000	
75%	5.000000	78.00000	
max	25.000000	99.00000	

	Guest Investment Amount	Guest Investment Equity	Guest Debt Amount	\
count	48.000000	48.000000	9.000000	
mean	39.760057	3.273438	37.257778	
std	34.690571	3.551611	25.051059	
min	0.000253	0.200000	12.500000	
25%	23.750000	1.000000	25.000000	
50%	31.665000	2.165000	30.000000	
75%	46.250000	4.000000	35.000000	
max	200.000000	17.500000	83.320000	

	Namita Present	Vineeta Present	Anupam Present	Aman Present	\
count	389.0	318.0	424.0	420.0	
mean	1.0	1.0	1.0	1.0	
std	0.0	0.0	0.0	0.0	
min	1.0	1.0	1.0	1.0	
25%	1.0	1.0	1.0	1.0	
50%	1.0	1.0	1.0	1.0	
75%	1.0	1.0	1.0	1.0	
max	1.0	1.0	1.0	1.0	

	Peyush Present	Amit Present	Ashneer Present	Guest Present
count	307.0	137.0	99.0	144.000000

mean	1.0	1.0	1.0	1.166667
std	0.0	0.0	0.0	0.373979
min	1.0	1.0	1.0	1.000000
25%	1.0	1.0	1.0	1.000000
50%	1.0	1.0	1.0	1.000000
75%	1.0	1.0	1.0	1.000000
max	1.0	1.0	1.0	2.000000

[6]:
```
data.info()
#We can see that all the columns have a not null constraint. But still to be␣
 ↪sure let's check if there any null values

'''Observations from the data:
    1) Season start,original air date and end are data columns but are in␣
 ↪object dtype
    2) Started in is in float but it need to be an int
    3) Male Presenters, Couple Presenters, Trans Presenters and Female␣
 ↪Presenters are also in float and need to be changed to int
    4) Number of sharks in the deal is also in float and need to be changed to␣
 ↪int '''
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 478 entries, 0 to 477
Data columns (total 78 columns):
 #   Column                    Non-Null Count  Dtype
---  ------                    --------------  -----
 0   Season Number             478 non-null    int64
 1   Startup Name              478 non-null    object
 2   Episode Number            478 non-null    int64
 3   Pitch Number              478 non-null    int64
 4   Season Start              478 non-null    object
 5   Season End                478 non-null    object
 6   Original Air Date         447 non-null    object
 7   Episode Title             478 non-null    object
 8   Anchor                    478 non-null    object
 9   Industry                  478 non-null    object
 10  Business Description      478 non-null    object
 11  Company Website           466 non-null    object
 12  Started in                355 non-null    float64
 13  Number of Presenters      478 non-null    int64
 14  Male Presenters           412 non-null    float64
 15  Female Presenters         226 non-null    float64
 16  Transgender Presenters    3 non-null      float64
 17  Couple Presenters         473 non-null    float64
 18  Pitchers Average Age      478 non-null    object
 19  Pitchers City             473 non-null    object
 20  Pitchers State            474 non-null    object
```

```
21  Yearly Revenue              241 non-null    float64
22  Monthly Sales               225 non-null    float64
23  Gross Margin                129 non-null    float64
24  Net Margin                  73 non-null     float64
25  EBITDA                      23 non-null     float64
26  Cash Burn                   64 non-null     object
27  SKUs                        28 non-null     float64
28  Has Patents                 43 non-null     object
29  Bootstrapped                48 non-null     object
30  Original Ask Amount         478 non-null    float64
31  Original Offered Equity     478 non-null    float64
32  Valuation Requested         478 non-null    float64
33  Received Offer              478 non-null    int64
34  Accepted Offer              321 non-null    float64
35  Total Deal Amount           268 non-null    float64
36  Total Deal Equity           268 non-null    float64
37  Total Deal Debt             62 non-null     float64
38  Debt Interest               45 non-null     float64
39  Deal Valuation              267 non-null    float64
40  Number of Sharks in Deal    268 non-null    float64
41  Deal Has Conditions         26 non-null     object
42  Royalty Deal                17 non-null     float64
43  Advisory Shares Equity      3 non-null      float64
44  Namita Investment Amount    89 non-null     float64
45  Namita Investment Equity    89 non-null     float64
46  Namita Debt Amount          17 non-null     float64
47  Vineeta Investment Amount   68 non-null     float64
48  Vineeta Investment Equity   68 non-null     float64
49  Vineeta Debt Amount         12 non-null     float64
50  Anupam Investment Amount    75 non-null     float64
51  Anupam Investment Equity    75 non-null     float64
52  Anupam Debt Amount          8 non-null      float64
53  Aman Investment Amount      109 non-null    float64
54  Aman Investment Equity      109 non-null    float64
55  Aman Debt Amount            18 non-null     float64
56  Peyush Investment Amount    89 non-null     float64
57  Peyush Investment Equity    89 non-null     float64
58  Peyush Debt Amount          12 non-null     float64
59  Amit Investment Amount      35 non-null     float64
60  Amit Investment Equity      35 non-null     float64
61  Amit Debt Amount            7 non-null      float64
62  Ashneer Investment Amount   21 non-null     float64
63  Ashneer Investment Equity   21 non-null     float64
64  Ashneer Debt Amount         2 non-null      float64
65  Guest Investment Amount     48 non-null     float64
66  Guest Investment Equity     48 non-null     float64
67  Guest Debt Amount           9 non-null      float64
68  Invested Guest Name         48 non-null     object
```

```
 69  All Guest Names            144 non-null    object
 70  Namita Present             389 non-null    float64
 71  Vineeta Present            318 non-null    float64
 72  Anupam Present             424 non-null    float64
 73  Aman Present               420 non-null    float64
 74  Peyush Present             307 non-null    float64
 75  Amit Present               137 non-null    float64
 76  Ashneer Present            99 non-null     float64
 77  Guest Present              144 non-null    float64
dtypes: float64(55), int64(5), object(18)
memory usage: 291.4+ KB
```

[6]:
```
'Observations from the data:\n    1) Season start,original air date and end are data columns but are in object dtype\n    2) Started in is in float but it need to be an int\n    3) Male Presenters, Couple Presenters, Trans Presenters and Female Presenters are also in float and need to be changed to int\n    4) Number of sharks in the deal is also in float and need to be changed to int '
```

[7]:
```
#getting the number of nulls in each row
print(data.isnull().sum())
```

```
Season Number                0
Startup Name                 0
Episode Number               0
Pitch Number                 0
Season Start                 0
Season End                   0
Original Air Date           31
Episode Title                0
Anchor                       0
Industry                     0
Business Description         0
Company Website             12
Started in                 123
Number of Presenters         0
Male Presenters             66
Female Presenters          252
Transgender Presenters     475
Couple Presenters            5
Pitchers Average Age         0
Pitchers City                5
Pitchers State               4
Yearly Revenue             237
Monthly Sales              253
Gross Margin               349
Net Margin                 405
EBITDA                     455
Cash Burn                  414
```

SKUs	450
Has Patents	435
Bootstrapped	430
Original Ask Amount	0
Original Offered Equity	0
Valuation Requested	0
Received Offer	0
Accepted Offer	157
Total Deal Amount	210
Total Deal Equity	210
Total Deal Debt	416
Debt Interest	433
Deal Valuation	211
Number of Sharks in Deal	210
Deal Has Conditions	452
Royalty Deal	461
Advisory Shares Equity	475
Namita Investment Amount	389
Namita Investment Equity	389
Namita Debt Amount	461
Vineeta Investment Amount	410
Vineeta Investment Equity	410
Vineeta Debt Amount	466
Anupam Investment Amount	403
Anupam Investment Equity	403
Anupam Debt Amount	470
Aman Investment Amount	369
Aman Investment Equity	369
Aman Debt Amount	460
Peyush Investment Amount	389
Peyush Investment Equity	389
Peyush Debt Amount	466
Amit Investment Amount	443
Amit Investment Equity	443
Amit Debt Amount	471
Ashneer Investment Amount	457
Ashneer Investment Equity	457
Ashneer Debt Amount	476
Guest Investment Amount	430
Guest Investment Equity	430
Guest Debt Amount	469
Invested Guest Name	430
All Guest Names	334
Namita Present	89
Vineeta Present	160
Anupam Present	54
Aman Present	58
Peyush Present	171

```
Amit Present                341
Ashneer Present             379
Guest Present               334
dtype: int64
```

[8]:
```
#Getting the missing values percentage in each column
print(data.isnull().sum()/len(data)*100)
```

```
Season Number                0.000000
Startup Name                 0.000000
Episode Number               0.000000
Pitch Number                 0.000000
Season Start                 0.000000
Season End                   0.000000
Original Air Date            6.485356
Episode Title                0.000000
Anchor                       0.000000
Industry                     0.000000
Business Description         0.000000
Company Website              2.510460
Started in                  25.732218
Number of Presenters         0.000000
Male Presenters             13.807531
Female Presenters           52.719665
Transgender Presenters      99.372385
Couple Presenters            1.046025
Pitchers Average Age         0.000000
Pitchers City                1.046025
Pitchers State               0.836820
Yearly Revenue              49.581590
Monthly Sales               52.928870
Gross Margin                73.012552
Net Margin                  84.728033
EBITDA                      95.188285
Cash Burn                   86.610879
SKUs                        94.142259
Has Patents                 91.004184
Bootstrapped                89.958159
Original Ask Amount          0.000000
Original Offered Equity      0.000000
Valuation Requested          0.000000
Received Offer               0.000000
Accepted Offer              32.845188
Total Deal Amount           43.933054
Total Deal Equity           43.933054
Total Deal Debt             87.029289
Debt Interest               90.585774
Deal Valuation              44.142259
```

```
Number of Sharks in Deal     43.933054
Deal Has Conditions          94.560669
Royalty Deal                 96.443515
Advisory Shares Equity       99.372385
Namita Investment Amount     81.380753
Namita Investment Equity     81.380753
Namita Debt Amount           96.443515
Vineeta Investment Amount    85.774059
Vineeta Investment Equity    85.774059
Vineeta Debt Amount          97.489540
Anupam Investment Amount     84.309623
Anupam Investment Equity     84.309623
Anupam Debt Amount           98.326360
Aman Investment Amount       77.196653
Aman Investment Equity       77.196653
Aman Debt Amount             96.234310
Peyush Investment Amount     81.380753
Peyush Investment Equity     81.380753
Peyush Debt Amount           97.489540
Amit Investment Amount       92.677824
Amit Investment Equity       92.677824
Amit Debt Amount             98.535565
Ashneer Investment Amount    95.606695
Ashneer Investment Equity    95.606695
Ashneer Debt Amount          99.581590
Guest Investment Amount      89.958159
Guest Investment Equity      89.958159
Guest Debt Amount            98.117155
Invested Guest Name          89.958159
All Guest Names              69.874477
Namita Present               18.619247
Vineeta Present              33.472803
Anupam Present               11.297071
Aman Present                 12.133891
Peyush Present               35.774059
Amit Present                 71.338912
Ashneer Present              79.288703
Guest Present                69.874477
dtype: float64
```

[9]:
```
#Checking the percentage of null values in the columns of type object
obj_cols = data.select_dtypes(include = 'object')
null_val = ((obj_cols.isnull().sum()/len(obj_cols))*100)
filtered_null = null_val[null_val > 0] #null values that are greater than 0 and␣
 ↪column is object type
print(filtered_null)
```

```
Original Air Date       6.485356
```

```
Company Website         2.510460
Pitchers City           1.046025
Pitchers State          0.836820
Cash Burn              86.610879
Has Patents            91.004184
Bootstrapped           89.958159
Deal Has Conditions    94.560669
Invested Guest Name    89.958159
All Guest Names        69.874477
dtype: float64
```

[10]:
```
#Dropping unwanted columns from the above
data.drop(columns = ['Company Website'], inplace = True)
```

[11]:
```
#Checking the number of unique values in each column
data.nunique()
```

[11]:
```
Season Number                3
Startup Name               478
Episode Number              53
Pitch Number               478
Season Start                 3
Season End                   3
Original Air Date          137
Episode Title              138
Anchor                       3
Industry                    17
Business Description       475
Started in                  16
Number of Presenters         6
Male Presenters              6
Female Presenters            3
Transgender Presenters       1
Couple Presenters            2
Pitchers Average Age         3
Pitchers City              113
Pitchers State              47
Yearly Revenue             129
Monthly Sales              104
Gross Margin                43
Net Margin                  32
EBITDA                      18
Cash Burn                    1
SKUs                        24
Has Patents                  1
Bootstrapped                 2
Original Ask Amount         48
```

Original Offered Equity	32
Valuation Requested	100
Received Offer	2
Accepted Offer	2
Total Deal Amount	39
Total Deal Equity	50
Total Deal Debt	19
Debt Interest	9
Deal Valuation	97
Number of Sharks in Deal	5
Deal Has Conditions	1
Royalty Deal	1
Advisory Shares Equity	3
Namita Investment Amount	31
Namita Investment Equity	35
Namita Debt Amount	11
Vineeta Investment Amount	24
Vineeta Investment Equity	32
Vineeta Debt Amount	7
Anupam Investment Amount	29
Anupam Investment Equity	40
Anupam Debt Amount	6
Aman Investment Amount	35
Aman Investment Equity	44
Aman Debt Amount	14
Peyush Investment Amount	29
Peyush Investment Equity	35
Peyush Debt Amount	7
Amit Investment Amount	19
Amit Investment Equity	18
Amit Debt Amount	6
Ashneer Investment Amount	9
Ashneer Investment Equity	14
Ashneer Debt Amount	2
Guest Investment Amount	24
Guest Investment Equity	25
Guest Debt Amount	8
Invested Guest Name	11
All Guest Names	9
Namita Present	1
Vineeta Present	1
Anupam Present	1
Aman Present	1
Peyush Present	1
Amit Present	1
Ashneer Present	1
Guest Present	2

```
dtype: int64
```

[12]:
```
#Dealing with null values in deal has conditions
data['Deal Has Conditions'].unique()
```

[12]:
```
array([nan, 'yes'], dtype=object)
```

[13]:
```
#Replacing Nan values with No
data['Deal Has Conditions'] = data['Deal Has Conditions'].fillna('no')
print(data['Deal Has Conditions'].head(10))
```

```
0     no
1     no
2     no
3     no
4     no
5     no
6     no
7     no
8    yes
9     no
Name: Deal Has Conditions, dtype: object
```

[14]:
```
print(data['Guest Present'].head())
#we can see that there are NaN values here as well, let us replace them with␣
 ↪Not Present
```

```
0   NaN
1   NaN
2   NaN
3   NaN
4   NaN
Name: Guest Present, dtype: float64
```

[15]:
```
#Replacing values in Guest Present
data['Guest Present'] = data['Guest Present'].fillna('Not Present')
print(data['Guest Present'].head())
```

```
0    Not Present
1    Not Present
2    Not Present
3    Not Present
4    Not Present
Name: Guest Present, dtype: object
```

[16]:
```
#Getting datatype of the column with float datatype
print(data.select_dtypes(include='float64').info())
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 478 entries, 0 to 477
Data columns (total 54 columns):
 #   Column                      Non-Null Count  Dtype
---  ------                      --------------  -----
 0   Started in                  355 non-null    float64
 1   Male Presenters             412 non-null    float64
 2   Female Presenters           226 non-null    float64
 3   Transgender Presenters      3 non-null      float64
 4   Couple Presenters           473 non-null    float64
 5   Yearly Revenue              241 non-null    float64
 6   Monthly Sales               225 non-null    float64
 7   Gross Margin                129 non-null    float64
 8   Net Margin                  73 non-null     float64
 9   EBITDA                      23 non-null     float64
 10  SKUs                        28 non-null     float64
 11  Original Ask Amount         478 non-null    float64
 12  Original Offered Equity     478 non-null    float64
 13  Valuation Requested         478 non-null    float64
 14  Accepted Offer              321 non-null    float64
 15  Total Deal Amount           268 non-null    float64
 16  Total Deal Equity           268 non-null    float64
 17  Total Deal Debt             62 non-null     float64
 18  Debt Interest               45 non-null     float64
 19  Deal Valuation              267 non-null    float64
 20  Number of Sharks in Deal    268 non-null    float64
 21  Royalty Deal                17 non-null     float64
 22  Advisory Shares Equity      3 non-null      float64
 23  Namita Investment Amount    89 non-null     float64
 24  Namita Investment Equity    89 non-null     float64
 25  Namita Debt Amount          17 non-null     float64
 26  Vineeta Investment Amount   68 non-null     float64
 27  Vineeta Investment Equity   68 non-null     float64
 28  Vineeta Debt Amount         12 non-null     float64
 29  Anupam Investment Amount    75 non-null     float64
 30  Anupam Investment Equity    75 non-null     float64
 31  Anupam Debt Amount          8 non-null      float64
 32  Aman Investment Amount      109 non-null    float64
 33  Aman Investment Equity      109 non-null    float64
 34  Aman Debt Amount            18 non-null     float64
 35  Peyush Investment Amount    89 non-null     float64
 36  Peyush Investment Equity    89 non-null     float64
 37  Peyush Debt Amount          12 non-null     float64
 38  Amit Investment Amount      35 non-null     float64
 39  Amit Investment Equity      35 non-null     float64
 40  Amit Debt Amount            7 non-null      float64
 41  Ashneer Investment Amount   21 non-null     float64
 42  Ashneer Investment Equity   21 non-null     float64
```

```
 43  Ashneer Debt Amount         2 non-null      float64
 44  Guest Investment Amount     48 non-null     float64
 45  Guest Investment Equity     48 non-null     float64
 46  Guest Debt Amount           9 non-null      float64
 47  Namita Present              389 non-null    float64
 48  Vineeta Present             318 non-null    float64
 49  Anupam Present              424 non-null    float64
 50  Aman Present                420 non-null    float64
 51  Peyush Present              307 non-null    float64
 52  Amit Present                137 non-null    float64
 53  Ashneer Present             99 non-null     float64
dtypes: float64(54)
memory usage: 201.8 KB
None
```

[17]:
```
#Filling all the null values with 0 in the float columns.
data[['Male Presenters','Female Presenters','Transgender Presenters',
     'Couple Presenters','Number of Sharks in Deal','Namita Present',
     'Vineeta Present','Anupam Present','Aman Present','Peyush Present',
     'Amit Present','Ashneer Present']] = data[['Male Presenters','Female␣
 ↪Presenters','Transgender Presenters',
     'Couple Presenters','Number of Sharks in Deal','Namita Present',
     'Vineeta Present','Anupam Present','Aman Present','Peyush Present',
     'Amit Present','Ashneer Present']].fillna(0)
```

[18]:
```
print(data[['Male Presenters','Female Presenters']].head(10))
```

```
   Male Presenters  Female Presenters
0              2.0                1.0
1              1.0                0.0
2              0.0                1.0
3              2.0                0.0
4              1.0                3.0
5              1.0                1.0
6              0.0                2.0
7              1.0                0.0
8              2.0                0.0
9              1.0                1.0
```

[19]:
```
#Changing the datatype into int
data[['Male Presenters','Female Presenters','Transgender Presenters',
     'Couple Presenters','Number of Sharks in Deal','Namita Present',
     'Vineeta Present','Anupam Present','Aman Present','Peyush Present',
     'Amit Present','Ashneer Present']] = data[['Male Presenters','Female␣
 ↪Presenters','Transgender Presenters',
     'Couple Presenters','Number of Sharks in Deal','Namita Present',
     'Vineeta Present','Anupam Present','Aman Present','Peyush Present',
```

```
    'Amit Present','Ashneer Present']].astype(int)
```

[20]:
```
#Checking the erros in cash burn
print(data['Cash Burn'].head())
# as we can see there are NaN values. Let us replace them with No info
```

```
0    NaN
1    NaN
2    NaN
3    NaN
4    NaN
Name: Cash Burn, dtype: object
```

[21]:
```
#Replacing nulla values with No
data['Cash Burn'] = data['Cash Burn'].fillna('No')
print(data['Cash Burn'].head())
```

```
0    No
1    No
2    No
3    No
4    No
Name: Cash Burn, dtype: object
```

[22]:
```
print(data.columns)
```

```
Index(['Season Number', 'Startup Name', 'Episode Number', 'Pitch Number',
       'Season Start', 'Season End', 'Original Air Date', 'Episode Title',
       'Anchor', 'Industry', 'Business Description', 'Started in',
       'Number of Presenters', 'Male Presenters', 'Female Presenters',
       'Transgender Presenters', 'Couple Presenters', 'Pitchers Average Age',
       'Pitchers City', 'Pitchers State', 'Yearly Revenue', 'Monthly Sales',
       'Gross Margin', 'Net Margin', 'EBITDA', 'Cash Burn', 'SKUs',
       'Has Patents', 'Bootstrapped', 'Original Ask Amount',
       'Original Offered Equity', 'Valuation Requested', 'Received Offer',
       'Accepted Offer', 'Total Deal Amount', 'Total Deal Equity',
       'Total Deal Debt', 'Debt Interest', 'Deal Valuation',
       'Number of Sharks in Deal', 'Deal Has Conditions', 'Royalty Deal',
       'Advisory Shares Equity', 'Namita Investment Amount',
       'Namita Investment Equity', 'Namita Debt Amount',
       'Vineeta Investment Amount', 'Vineeta Investment Equity',
       'Vineeta Debt Amount', 'Anupam Investment Amount',
       'Anupam Investment Equity', 'Anupam Debt Amount',
       'Aman Investment Amount', 'Aman Investment Equity', 'Aman Debt Amount',
       'Peyush Investment Amount', 'Peyush Investment Equity',
       'Peyush Debt Amount', 'Amit Investment Amount',
       'Amit Investment Equity', 'Amit Debt Amount',
       'Ashneer Investment Amount', 'Ashneer Investment Equity',
```

```
       'Ashneer Debt Amount', 'Guest Investment Amount',
       'Guest Investment Equity', 'Guest Debt Amount', 'Invested Guest Name',
       'All Guest Names', 'Namita Present', 'Vineeta Present',
       'Anupam Present', 'Aman Present', 'Peyush Present', 'Amit Present',
       'Ashneer Present', 'Guest Present'],
      dtype='object')
```

[23]:
```
#Removing uncessary columns for our analysis
data.drop(columns=['Has Patents'],inplace = True)
```

[24]:
```
#Cleaning the sales data
data[['Yearly Revenue','Monthly Sales','Gross Margin','Net Margin']].head()
```

[24]:

	Yearly Revenue	Monthly Sales	Gross Margin	Net Margin
0	95.0	8.0	NaN	NaN
1	4.0	0.4	NaN	NaN
2	NaN	2.0	NaN	NaN
3	700.0	NaN	48.0	NaN
4	30.0	NaN	NaN	NaN

[25]:
```
#Getting the number of nulls in the datas
data[['Yearly Revenue','Monthly Sales','Gross Margin','Net Margin']].isnull().
 ↪sum()
```

[25]:
```
Yearly Revenue    237
Monthly Sales     253
Gross Margin      349
Net Margin        405
dtype: int64
```

[26]:
```
#Filling the null values
data[['Yearly Revenue','Monthly Sales',
      'Gross Margin','Net Margin']] = data[['Yearly Revenue','Monthly Sales',
                                            'Gross Margin', 'Net␣
 ↪Margin']].fillna(0)
```

[27]:
```
#Checking the errors in Accepted offer
data['Accepted Offer'].isnull().sum()

#Filling null values with 0
data['Accepted Offer'] = data['Accepted Offer'].fillna(0)
print(data['Accepted Offer'].head())
```

```
0    1.0
1    1.0
2    1.0
3    1.0
```

```
4    0.0
Name: Accepted Offer, dtype: float64
```

[28]:
```
#Changing datattypes
data['Accepted Offer'] = data[['Accepted Offer']].astype(int)
```

[29]:
```
#Fixing the offer data
data[["Total Deal Amount","Original Offered Equity","Total Deal Equity","Total␣
 ↪Deal Debt"
,"Debt Interest","Deal Valuation"]]=data[["Total Deal Amount","Original Offered␣
 ↪Equity",
                                          "Total Deal Equity","Total Deal␣
 ↪Debt","Debt Interest","Deal Valuation"]].fillna(0)
```

[30]:
```
#Checking what other columns have null vaues
data.isnull().sum()
```

[30]:
```
Season Number                0
Startup Name                 0
Episode Number               0
Pitch Number                 0
Season Start                 0
Season End                   0
Original Air Date           31
Episode Title                0
Anchor                       0
Industry                     0
Business Description         0
Started in                 123
Number of Presenters         0
Male Presenters              0
Female Presenters            0
Transgender Presenters       0
Couple Presenters            0
Pitchers Average Age         0
Pitchers City                5
Pitchers State               4
Yearly Revenue               0
Monthly Sales                0
Gross Margin                 0
Net Margin                   0
EBITDA                     455
Cash Burn                    0
SKUs                       450
Bootstrapped               430
Original Ask Amount          0
Original Offered Equity      0
```

```
Valuation Requested            0
Received Offer                 0
Accepted Offer                 0
Total Deal Amount              0
Total Deal Equity              0
Total Deal Debt                0
Debt Interest                  0
Deal Valuation                 0
Number of Sharks in Deal       0
Deal Has Conditions            0
Royalty Deal                 461
Advisory Shares Equity       475
Namita Investment Amount     389
Namita Investment Equity     389
Namita Debt Amount           461
Vineeta Investment Amount    410
Vineeta Investment Equity    410
Vineeta Debt Amount          466
Anupam Investment Amount     403
Anupam Investment Equity     403
Anupam Debt Amount           470
Aman Investment Amount       369
Aman Investment Equity       369
Aman Debt Amount             460
Peyush Investment Amount     389
Peyush Investment Equity     389
Peyush Debt Amount           466
Amit Investment Amount       443
Amit Investment Equity       443
Amit Debt Amount             471
Ashneer Investment Amount    457
Ashneer Investment Equity    457
Ashneer Debt Amount          476
Guest Investment Amount      430
Guest Investment Equity      430
Guest Debt Amount            469
Invested Guest Name          430
All Guest Names              334
Namita Present                 0
Vineeta Present                0
Anupam Present                 0
Aman Present                   0
Peyush Present                 0
Amit Present                   0
Ashneer Present                0
Guest Present                  0
dtype: int64
```

[31]:
```
#Dropping more columns
percent_cal = data[['Started in','SKUs','EBITDA','Bootstrapped']]
null_percentage = (percent_cal.isnull().sum()/len(percent_cal))*100
print(null_percentage)
```

```
Started in      25.732218
SKUs            94.142259
EBITDA          95.188285
Bootstrapped    89.958159
dtype: float64
```

[32]:
```
#Since the above columns have a lot of null values, we can drop them except for␣
 ↪the started in column, we will replace that with 0
data.drop(columns = ['SKUs','EBITDA','Bootstrapped'],inplace = True)
```

[33]:
```
#Replacing the values in Started in
data['Started in'].fillna(0,inplace = True)
```

[33]:
```

```

1 Analysis and Insights

[34]:
```
#Number of seasons and episodes aired per season
episodes = data[data['Episode Number'] != 0]
episodes.groupby(['Season Number'])['Episode Number'].nunique() #number of␣
 ↪episodes per season
```

[34]:
```
Season Number
1    36
2    51
3    52
Name: Episode Number, dtype: int64
```

[35]:
```
#Sum of all episodes aired till date
episodes.groupby(['Season Number'])['Episode Number'].nunique().sum()
```

[35]:
```
139
```

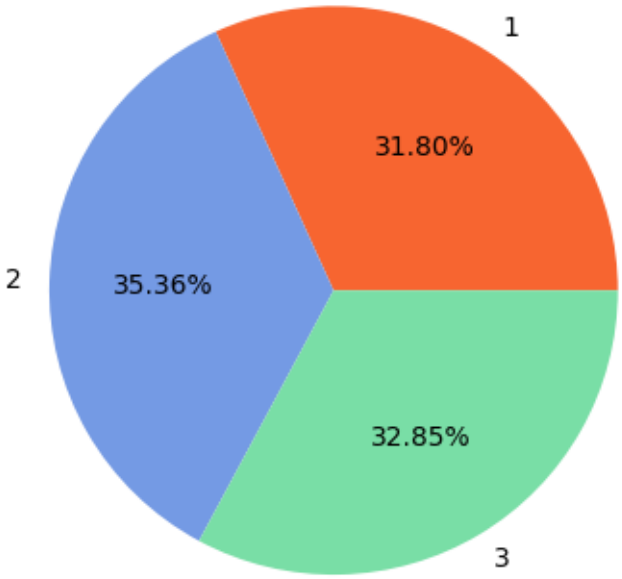
[36]:
```
#Total number of picthes on Shark Tank
data['Pitch Number'].nunique()
```

[36]:
```
478
```

[37]:
```
#Total number of pitches per season
pitch_no = data[data['Pitch Number']!= 0]
pitch_no.groupby(['Season Number'])['Pitch Number'].count()
```

[37]:
```
Season Number
1    152
2    169
3    157
Name: Pitch Number, dtype: int64
```

[38]:
```
plt.pie(data.groupby(["Season Number"])["Pitch Number"].count().
  ↪values,labels=data.groupby(["Season Number"])["Pitch Number"].count().
  ↪index,autopct="%.2f%%",
        colors=['#F76530', '#749AE4', '#79DEA6']);
```



[39]:
```
#What are the different industries in the pictes
industry = data['Industry'].unique()
print(industry)
```

```
['Food' 'Vehicles/Electrical Vehicles' 'Beauty/Fashion' 'Education'
 'Agriculture' 'Medical/Health' 'Manufacturing' 'Technology/Software'
 'Electronics' 'Animal/Pets' 'Services' 'Hardware' 'Sports'
 'Liquor/Beverages' 'Entertainment' 'Furnishing/Household' 'Others']
```

[40]:
```
#Top 5 industries that partcipated in Shark tank
data['Industry'].value_counts()[0:5]
```

```
#We can see that food is the most pitched industry followed by Beauty and␣
 ↪Manufacturing
```

[40]:
```
Industry
Food                    107
Beauty/Fashion           95
Manufacturing            50
Technology/Software      49
Services                 39
Name: count, dtype: int64
```

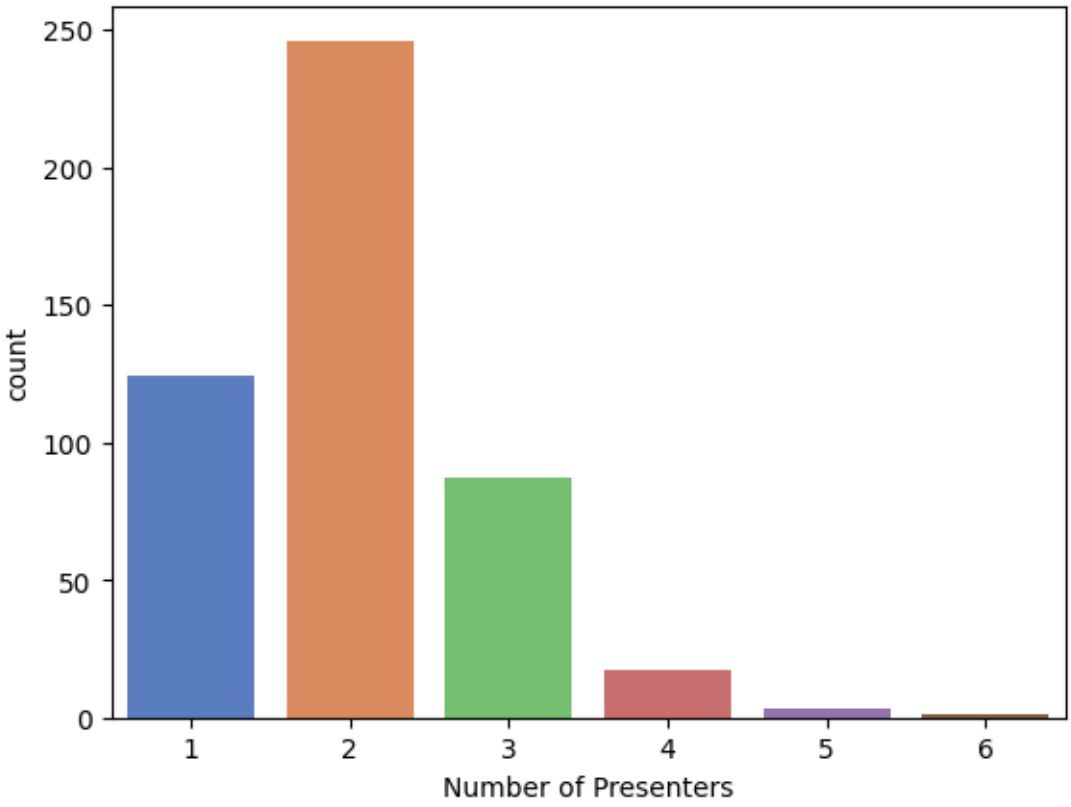
[41]:
```
#Number of Presenters in most teams
sns.countplot(x='Number of Presenters',data=data,palette='muted')
```

```
<ipython-input-41-8e75284ed8e4>:2: FutureWarning:

Passing `palette` without assigning `hue` is deprecated and will be removed in
v0.14.0. Assign the `x` variable to `hue` and set `legend=False` for the same
effect.

  sns.countplot(x='Number of Presenters',data=data,palette='muted')
```

[41]:
```
<Axes: xlabel='Number of Presenters', ylabel='count'>
```



[42]:
```
#Total pitchers, Number of male pitchers and female pitchers
print('Total Pitchers:',int(data['Number of Presenters'].sum()))
print('The number of male Pitches:',int(data['Male Presenters'].sum()))
print('The number of Female Pitches:',int(data['Female Presenters'].sum()))
print('The number of Transgender Pitches:',int(data['Transgender Presenters'].
 ↪sum()))
print('The number of Couple Pitches:',int(data['Couple Presenters'].sum()))
```

```
Total Pitchers: 966
The number of male Pitches: 692
The number of Female Pitches: 271
The number of Transgender Pitches: 3
The number of Couple Pitches: 84
```

[43]:
```
#Number of startups during COVID (started between 2019 - 2021)
print('The total number of startups started during COVID: ',data[data['Started␣
 ↪in'].between(2019, 2021)]['Startup Name'].count())
```

```
The total number of startups started during COVID:  182
```

[44]:
```
#Number of startups that rejected the shark offers
number_rejected = data[data['Accepted Offer'] == 0]['Startup Name'].count()
print('The Number of Startups that rejected the shark offers:',number_rejected)
```

```
The Number of Startups that rejected the shark offers: 210
```

[45]:
```
#Number of all shark deals
all_shark = data[data['Number of Sharks in Deal'] == 5]['Startup Name'].count()
print('Number of all shark deal:',all_shark)

avg_sharks_per_deal = round(data['Number of Sharks in Deal'].mean(),2)
print('The average number of sharks per deal:',avg_sharks_per_deal)
```

```
Number of all shark deal: 14
The average number of sharks per deal: 1.13
```

[46]:
```
#Number of companies that got same valuation as requested
val_as_req = data[data['Valuation Requested'] == data['Deal␣
 ↪Valuation']]['Startup Name'].count()
print('Number of companies that got same valuation as requested:',val_as_req)

#Percentage of these startups to the total pitches
total_pitches = data['Pitch Number'].nunique()
per_of_val_as_req = round((val_as_req/total_pitches)*100,2)
```

```
print('Percentage of startups that got same valuation as requested:
 ↪',per_of_val_as_req)
```

```
Number of companies that got same valuation as requested: 31
Percentage of startups that got same valuation as requested: 6.49
```

[47]:
```
#Startups with highest Monthly revenue
highest_monthly_rev = int(data['Monthly Sales'].max())
filtered_data = data[data['Monthly Sales'] == highest_monthly_rev]
startup_name = filtered_data['Startup Name']
print('The highest Revenue by a startup in a month:',startup_name.iloc[0] + '␣
 ↪earned ' + str(highest_monthly_rev) + ' Lakhs.')

#Startups with highest yearly revenue
highest_yearly_rev = int(data['Yearly Revenue'].max())
filter_data = data[data['Yearly Revenue'] == highest_yearly_rev]
startup_names = filter_data['Startup Name']
print('The highest Revenue by a startup in a year:',startup_names.iloc[0] + '␣
 ↪earned ' + str(highest_yearly_rev) + ' Lakhs.')
```

```
The highest Revenue by a startup in a month: Refit earned 3500 Lakhs.
The highest Revenue by a startup in a year: Refit earned 18700 Lakhs.
```

[48]:
```
#Number of pre revnue startups
pre_rev = data[data['Yearly Revenue'] == 0]['Startup Name'].count()
print('The number of pre revenue startups:', pre_rev)
print('\n')

#Number of pre revnue startups per season
pre_rev_data = data[data['Yearly Revenue'] == 0]
pre_revenue_per_season = pre_rev_data.groupby('Season Number')['Season Number'].
 ↪count()
print('Total Number of Pre Revenue startups per season:',pre_revenue_per_season)
```

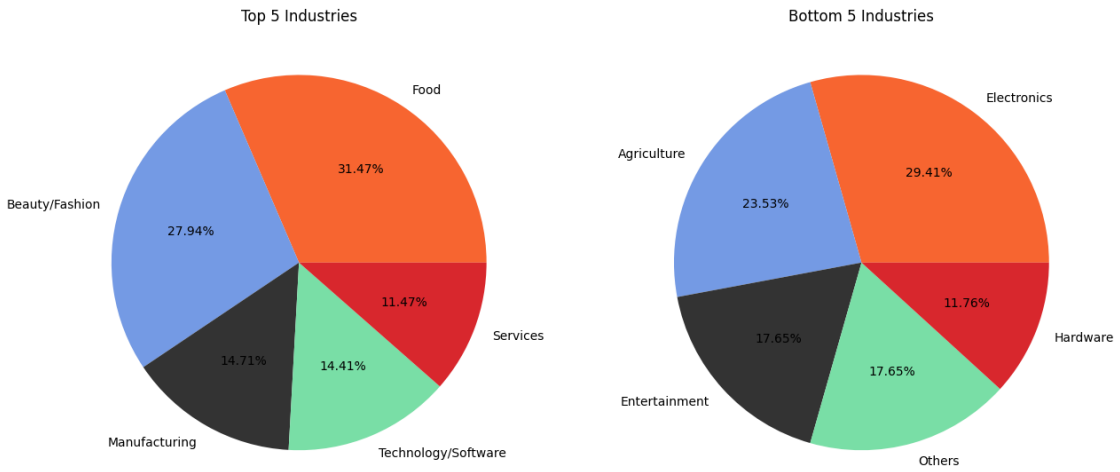
```
The number of pre revenue startups: 260


Total Number of Pre Revenue startups per season: Season Number
1     85
2    125
3     50
Name: Season Number, dtype: int64
```

[49]:
```
#Top 5 and Bottom 5 industries
color = ['#F76530', '#749AE4', '#333333', '#79DEA6', '#D8272D']
plt.figure(figsize=(15,8))
plt.subplot(1,2,1)
```

```
plt.pie(data["Industry"].value_counts()[0:5].values,labels=data["Industry"].
  ↪value_counts()[0:5].index,autopct="%.2f%%",colors=color);
plt.title("Top 5 Industries")
plt.subplot(1,2,2)
plt.pie(data["Industry"].value_counts().tail(5).values,labels=data["Industry"].
  ↪value_counts().tail(5).index,autopct="%.2f%%",colors=color);
plt.title("Bottom 5 Industries")
```

[49]:
```
Text(0.5, 1.0, 'Bottom 5 Industries')
```



[50]:
```
#Top 5 cities where pitchers were from
top_5 = data['Pitchers City'].value_counts()[0:5]
print('Top 5 cities:',top_5)
```

```
Top 5 cities: Pitchers City
Mumbai       76
Delhi        67
Bangalore    50
Pune         27
Ahmedabad    24
Name: count, dtype: int64
```

[51]:
```
#Number of offers that were accepted by season
acc_off = data.groupby(['Season Number'])['Accepted Offer'].value_counts()
print('Total number of offer accepted by season:',acc_off)
#0 = No, 1 = Yes
```

```
Total number of offer accepted by season: Season Number  Accepted Offer
1              0                 82
               1                 70
```

```
2              1                106
               0                 63
3              1                 92
               0                 65
Name: count, dtype: int64
```

[52]:
```
#Total Amount invested by Anupam per season
anupam_amt = round(data.groupby(['Season Number'])['Anupam Investment Amount'].
 ↪sum(),2)
print('Total Amount invested by Anupam per season in Lakhs:',anupam_amt)
```

```
Total Amount invested by Anupam per season in Lakhs: Season Number
1    536.33
2    914.83
3    768.32
Name: Anupam Investment Amount, dtype: float64
```

[53]:
```
#Total Amount invested by Ashneer per season
ashneer_amt = round(data.groupby(['Season Number'])['Ashneer Investment␣
 ↪Amount'].sum(),2)
print('Total Amount invested by Ashneer per season in Lakhs:',ashneer_amt)
```

```
Total Amount invested by Ashneer per season in Lakhs: Season Number
1    539.33
2      0.00
3      0.00
Name: Ashneer Investment Amount, dtype: float64
```

[54]:
```
#Total Amount invested by Namita per season
namita_amt = round(data.groupby(['Season Number'])['Namita Investment Amount'].
 ↪sum(),2)
print('Total Amount invested by Namita per season in Lakhs:',namita_amt)
```

```
Total Amount invested by Namita per season in Lakhs: Season Number
1     708.63
2    1388.88
3     834.33
Name: Namita Investment Amount, dtype: float64
```

[55]:
```
#Total Amount invested by Vineeta per season
vineeta_amt = round(data.groupby(['Season Number'])['Vineeta Investment␣
 ↪Amount'].sum(),2)
print('Total Amount invested by Vineeta per season in Lakhs:',vineeta_amt)
```

```
Total Amount invested by Vineeta per season in Lakhs: Season Number
1    363.62
2    806.98
3    954.16
```

```
Name: Vineeta Investment Amount, dtype: float64
```

[56]:
```
#Total Amount invested by Peyush per season
peyush_amt = round(data.groupby(['Season Number'])['Peyush Investment Amount'].
 ↪sum(),2)
print('Total Amount invested by Peyush per season in Lakhs:',peyush_amt)
```

```
Total Amount invested by Peyush per season in Lakhs: Season Number
1     819.65
2    1390.73
3     875.00
Name: Peyush Investment Amount, dtype: float64
```

[57]:
```
#Total Amount invested by Aman per season
Aman_amt = round(data.groupby(['Season Number'])['Aman Investment Amount'].
 ↪sum(),2)
print('Total Amount invested by Peyush per season in Lakhs:',Aman_amt)
```

```
Total Amount invested by Peyush per season in Lakhs: Season Number
1     896.99
2    1613.05
3    1181.66
Name: Aman Investment Amount, dtype: float64
```

[58]:
```
#Total Amount invested by sharks

#Total amount invested by Aman
print('Total Amount invest by Peyush in Lakhs:',round(data['Aman Investment␣
 ↪Amount'].sum(),2))

#Total amount invested by Peyush
print('Total Amount invest by Peyush in Lakhs:',round(data['Peyush Investment␣
 ↪Amount'].sum(),2))

#Total amount invested by Vineeta
print('Total Amount invest by Vineeta in Lakhs:',round(data['Vineeta Investment␣
 ↪Amount'].sum(),2))

#Total amount invested by Namita
print('Total Amount invest by Namita in Lakhs:',round(data['Namita Investment␣
 ↪Amount'].sum(),2))

#Total amount invested by Ashneer
print('Total Amount invest by Ashneer in Lakhs:',round(data['Ashneer Investment␣
 ↪Amount'].sum(),2))

#Total amount invested by Anupam
```

```
print('Total Amount invest by Anupam in Lakhs:',round(data['Anupam Investment␣
  ↪Amount'].sum(),2))
```

```
Total Amount invest by Peyush in Lakhs: 3691.7
Total Amount invest by Peyush in Lakhs: 3085.38
Total Amount invest by Vineeta in Lakhs: 2124.76
Total Amount invest by Namita in Lakhs: 2931.84
Total Amount invest by Ashneer in Lakhs: 539.33
Total Amount invest by Anupam in Lakhs: 2219.48
```