FORTUNE 500 COMPANIES

CONTENTS

ACKNOWLEGEMENT

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INTRODUCTION

- The emergence of technology in today's world has led to massive Data Generation.

- Data Analytics refers to all the tools and activities involved in processing data to develop valuable insights and interpretations.

- Data Visualization deals with picturing the information to develop trends and conclusions.

PROJECT STATEMENT

1. To find the top 10 industries with highest profit based on year 2021.

2. To find the top 10 and last10 companies based on Income.

Data Collection

Table form of data

	Rank		Unnamed: 2_level_0	Unnamed: 3_level_0	Unnamed: 4_level_0	Total Income		Net Income		Profit	...	RONW	ROCE			Employees		Unnamed 25_level_0
	2021	2020	Change	Company	Ownership	industry	Rs cr	YoY change %	Rs cr	YoY change %	...	Rank	YoY change %	Rs cr	Rank	YoY change %	(%
0	1	1	0	Reliance Industries	Mukesh Ambani	Oil & gas	514217	-16.50	466924	-21.86	...	7.0	30.71	700172.0	1.0	55.88	8.4
1	2	4	2	State Bank of India	Govt of India	Banks	385338	4.71	278115	3.06	...	1.0	15.59	251984.0	2.0	10.86	10.1(
2	3	2	-1	Indian Oil Corporation	Govt of India	Oil & gas	374828	-24.02	363950	-24.77	...	27.0	1.73	111838.0	8.0	17.23	21.0(
3	4	3	-1	ONGC	Govt of India	Oil & gas	325179	-19.83	304001	-23.38	...	16.0	8.14	220981.0	3.0	7.74	10.0:
4	5	6	1	Tata Motors	Tata	Auto	249646	-4.70	249795	-4.32	...	30.0	5.27	55247.0	27.0	-12.42	5.2:
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
495	496	499	3	Ahluwalia Contracts (India)	Bikramjit Ahluwalia	Construction	2005	5.76	1982	5.16	...	473.0	13.95	879.0	441.0	9.46	9.1i
496	497	438	-59	Himatsingka Seide	DK Himatsingka	Textiles	1994	-16.90	2258	-4.22	...	305.0	-9.01	1315.0	397.0	-3.29	-3.9!
497	498	NAP	NEW	Tata Teleservices	Tata	Telecom (Ancillaries)	1982	-19.52	1605	-13.29	...	463.0	-66.71	-17787.0	499.0	-41.32	0.0(
498	499	NAP	NEW	Dodla Dairy	Dodla Sunil Reddy	FMCG	1966	-5.87	1944	-9.13	...	490.0	26.80	658.0	460.0	51.79	23.0i
499	500	NAP	NEW	Jyothy Labs	MP Ramachandran	FMCG	1954	10.82	1909	11.57	...	440.0	1.65	1429.0	389.0	16.27	15.8

500 rows × 30 columns

Information of columns

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 500 entries, 0 to 499
Data columns (total 30 columns):
 #     Column                                            Non-Null Count   Dtype
---    ------                                            --------------   -----
 0     (Rank, 2021)                                      500 non-null     int64
 1     (Rank, 2020)                                      476 non-null     object
 2     (Unnamed: 2_level_0, Change)                      500 non-null     object
 3     (Unnamed: 3_level_0, Company)                     500 non-null     object
 4     (Unnamed: 4_level_0, Ownership)                   500 non-null     object
 5     (Total Income, industry)                          500 non-null     object
 6     (Total Income, Rs cr)                             500 non-null     int64
 7     (Net Income, YoY change %)                        500 non-null     float64
 8     (Net Income, Rs cr)                               500 non-null     int64
 9     (Profit, YoY change %)                            500 non-null     float64
 10    (Profit, Rs cr)                                   500 non-null     int64
 11    (Interest cost, Rank)                             500 non-null     int64
 12    (Interest cost, YoY change %)                     500 non-null     float64
 13    (Cash & Bank Balance, % of total income)          500 non-null     object
 14    (Total Debt, Rs cr)                               500 non-null     object
 15    (Debt-Equity Ratio, % of Ebitda)                  500 non-null     object
 16    (Total Assets, Rs cr)                             500 non-null     float64
 17    (Total Assets, Rs cr.1)                           500 non-null     float64
 18    (Networth, (x))                                   500 non-null     float64
 19    (Networth, Rs cr)                                 500 non-null     float64
 20    (RONW, Rank)                                      500 non-null     float64
 21    (ROCE, YoY change %)                              500 non-null     float64
 22    (Employees, Rs cr)                                500 non-null     float64
 23    (Employees, Rank)                                 500 non-null     float64
 24    (Employees, YoY change %)                         500 non-null     float64
 25    (Unnamed: 25_level_0, (%))                        500 non-null     float64
 26    (Unnamed: 26_level_0, (%))                        493 non-null     float64
 27    (Unnamed: 27_level_0, (in nos))                   434 non-null     float64
 28    (Unnamed: 28_level_0, Rank)                       430 non-null     float64
 29    (Unnamed: 29_level_0, YoY change %)               394 non-null     object
dtypes: float64(16), int64(5), object(9)
memory usage: 117.3+ KB
```

DATA CLEANING

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 500 entries, 1 to 500
Data columns (total 30 columns):
 #    Column                                          Non-Null Count   Dtype
---   ------                                          --------------   -----
 0    (Rank, 2021)                                    500 non-null     int64
 1    (Rank.1, 2020)                                  476 non-null     object
 2    (Unnamed: 2_level_0, Change)                    500 non-null     object
 3    (Unnamed: 3_level_0, Company)                   500 non-null     object
 4    (Unnamed: 4_level_0, Ownership)                 500 non-null     object
 5    (Total Income, industry)                        500 non-null     object
 6    (Total Income.1, Rs cr)                         500 non-null     object
 7    (Net Income, YoY change %)                      500 non-null     object
 8    (Net Income.1, Rs cr)                           500 non-null     object
 9    (Profit, YoY change %)                          500 non-null     object
 10   (Profit.1, Rs cr)                               500 non-null     object
 11   (Interest cost, Rank)                           500 non-null     object
 12   (Interest cost.1, YoY change %)                 500 non-null     object
 13   (Cash & Bank Balance, % of total income)        500 non-null     object
 14   (Total Debt, Rs cr)                             500 non-null     object
 15   (Debt-Equity Ratio, % of Ebitda)                500 non-null     object
 16   (Total Assets, Rs cr)                           500 non-null     object
 17   (Total Assets.1, Rs cr.1)                       500 non-null     object
 18   (Networth, (x))                                 500 non-null     object
 19   (Networth.1, Rs cr)                             500 non-null     object
 20   (RONW, Rank)                                    500 non-null     object
 21   (ROCE, YoY change %)                            500 non-null     object
 22   (Employees, Rs cr)                              500 non-null     object
 23   (Employees.1, Rank)                             500 non-null     object
 24   (Employees.2, YoY change %)                     500 non-null     object
 25   (Unnamed: 25_level_0, (%))                      500 non-null     object
 26   (Unnamed: 26_level_0, (%))                      493 non-null     object
 27   (Unnamed: 27_level_0, (in nos))                 434 non-null     object
 28   (Unnamed: 28_level_0, Rank)                     430 non-null     object
 29   (Unnamed: 29_level_0, YoY change %)             394 non-null     object
dtypes: int64(1), object(29)
memory usage: 117.3+ KB
```

Removing nulls and Renaming columns


```
Rank                     2021                        0
Rank.1                   2020                       24
Unnamed: 2_level_0       Change                      0
Unnamed: 3_level_0       Company                     0
Unnamed: 4_level_0       Ownership                   0
Total Income             industry                    0
Total Income.1           Rs cr                       0
Net Income               YoY change %                0
Net Income.1             Rs cr                       0
Profit                   YoY change %                0
Profit.1                 Rs cr                       0
Interest cost            Rank                        0
Interest cost.1          YoY change %                0
Cash & Bank Balance      % of total income           0
Total Debt               Rs cr                       0
Debt-Equity Ratio        % of Ebitda                 0
Total Assets             Rs cr                       0
Total Assets.1           Rs cr.1                     0
Networth                 (x)                         0
Networth.1               Rs cr                       0
RONW                     Rank                        0
ROCE                     YoY change %                0
Employees                Rs cr                       0
Employees.1              Rank                        0
Employees.2              YoY change %                0
Unnamed: 25_level_0      (%)                         0
Unnamed: 26_level_0      (%)                         7
Unnamed: 27_level_0      (in nos)                   66
Unnamed: 28_level_0      Rank                       70
Unnamed: 29_level_0      YoY change %              106
dtype: int64
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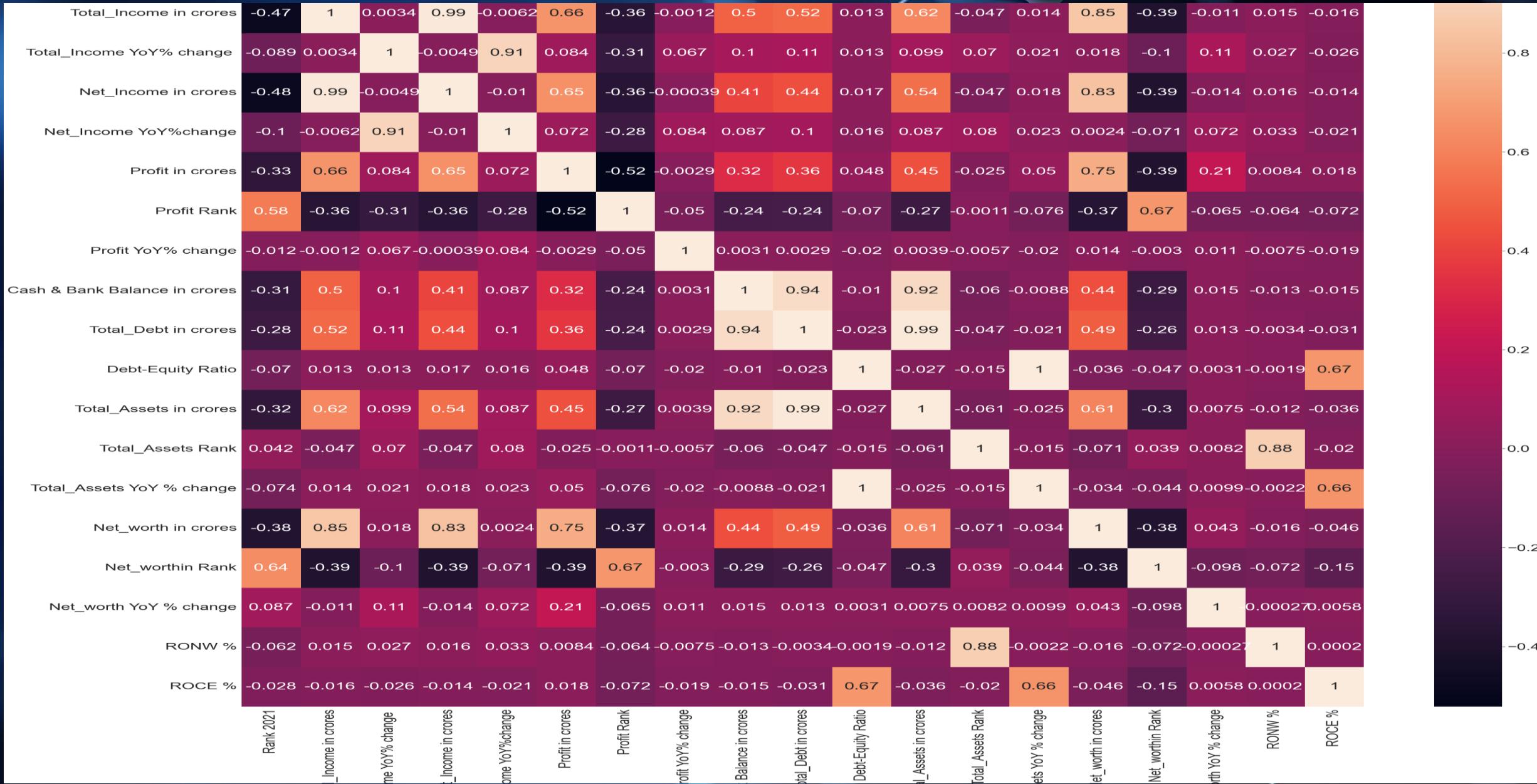
```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 500 entries, 0 to 499
Data columns (total 27 columns):
 #    Column                          Non-Null Count    Dtype
---   ------                          --------------    -----
 0    Rank 2021                       500 non-null      int64
 1    Rank 2020                       500 non-null      object
 2    Rank change                     500 non-null      object
 3    Company name                    500 non-null      object
 4    Ownership                       500 non-null      object
 5    Industry                        500 non-null      object
 6    Total_Income in crores          500 non-null      int64
 7    Total_Income YoY% change        500 non-null      float64
 8    Net_Income in crores            500 non-null      int64
 9    Net_Income YoY%change           500 non-null      float64
 10   Profit in crores                500 non-null      int64
 11   Profit Rank                     500 non-null      int64
 12   Profit YoY% change              500 non-null      float64
 13   Profit % of TotalIncome         500 non-null      object
 14   Interest_cost in crores         500 non-null      object
 15   Interest_cost % of Ebitda       500 non-null      object
 16   Cash & Bank Balance in crores   500 non-null      float64
 17   Total_Debt in crores            500 non-null      float64
 18   Debt-Equity Ratio               500 non-null      float64
 19   Total_Assets in crores          500 non-null      float64
 20   Total_Assets Rank               500 non-null      float64
 21   Total_Assets YoY % change       500 non-null      float64
 22   Net_worth in crores             500 non-null      float64
 23   Net_worthin Rank                500 non-null      float64
 24   Net_worth YoY % change          500 non-null      float64
 25   RONW %                          500 non-null      float64
 26   ROCE %                          500 non-null      float64
dtypes: float64(14), int64(5), object(8)
memory usage: 105.6+ KB
```

# Data Analysis & Data Visualization

correlation
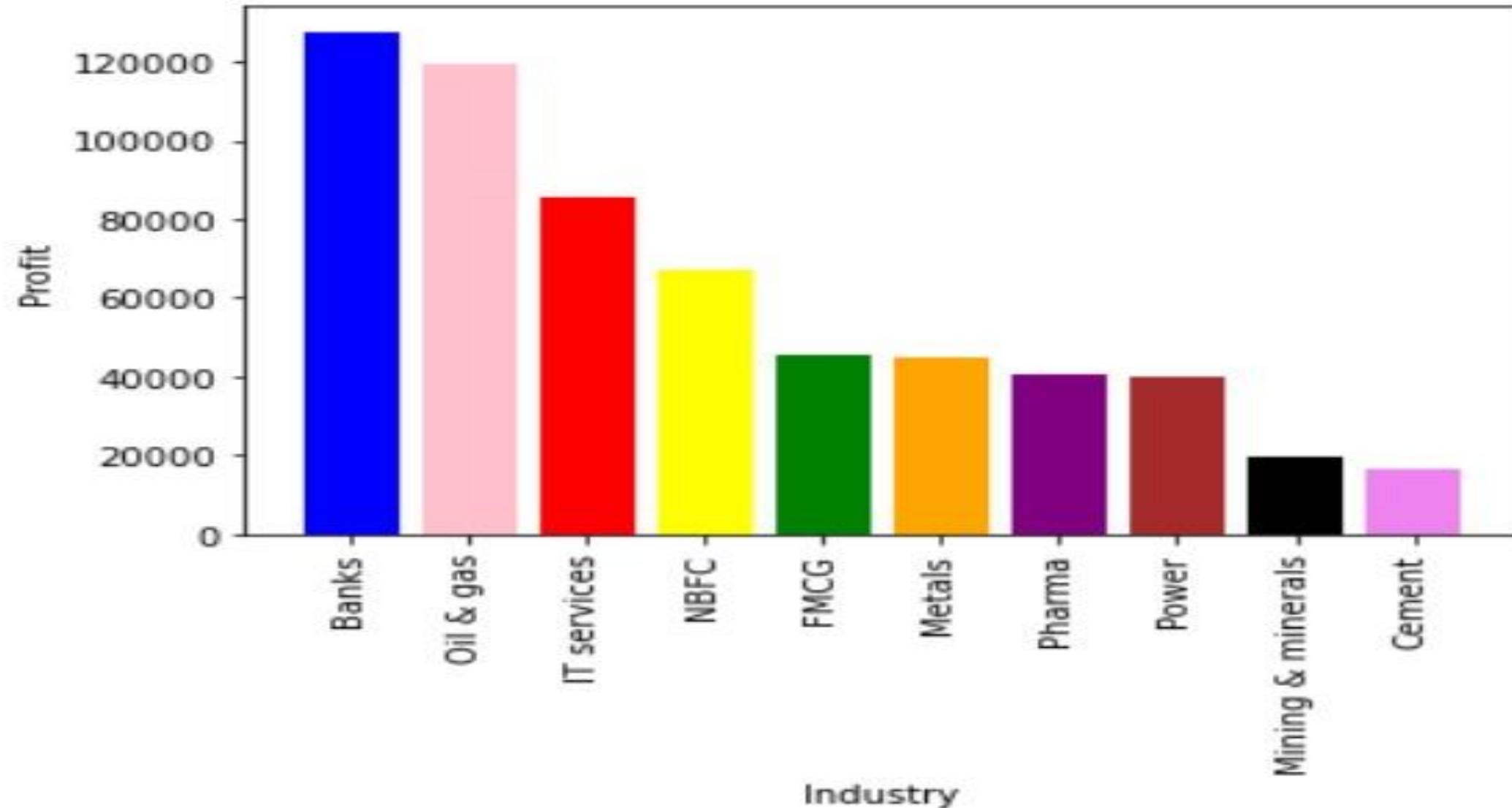
grouping
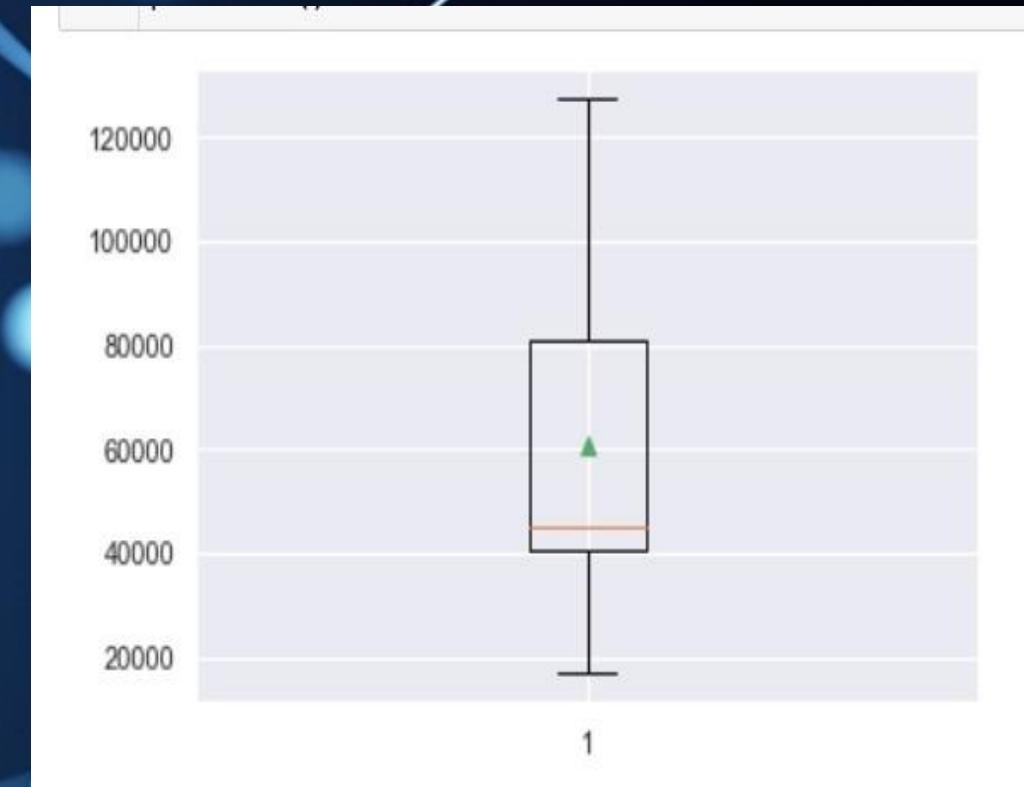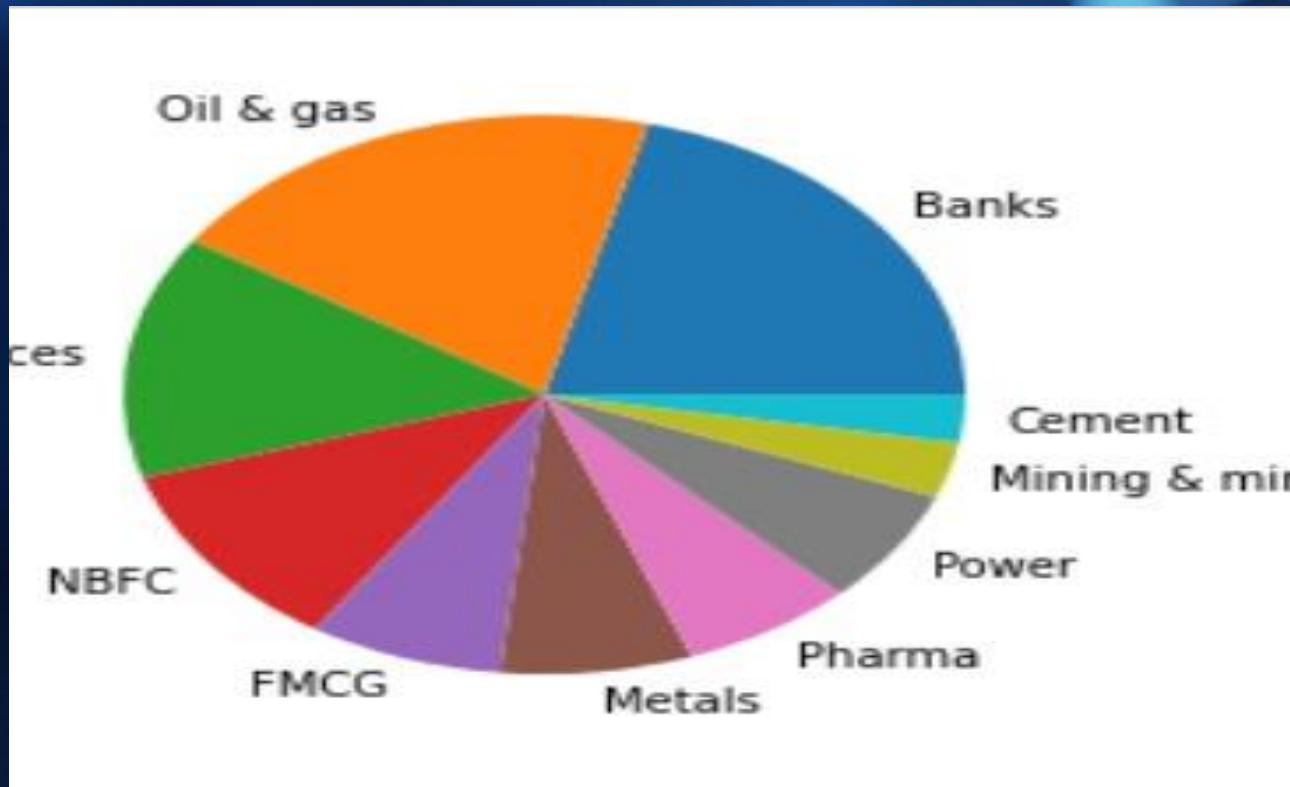
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{'Auto': 2706,
 'Auto ancillaries': 11162,
 'Aviation': -5806,
 'Banks': 127671,
 'Cement': 16682,
 'Chemicals': 4698,
 'Construction': 1940,
 'Consumer durables': 5809,
 'Consumer products': 400,
 'Diversified': 6645,
 'Electronics': 2559,
 'Engineering': 14855,
 'FMCG': 45459,
 'Fertilisers & agrochem': 9608,
 'Financial services': 5213,
 'Gems & jewellery': 1165,
 'Gems & jewellery (refiner)': -246,
 'Healthcare': 100,
 'Holding Company': 113,
 'Hospitality': -3382,
 'IT services': 85552,
 'Infotech': 594,
 'Infrastructure': 1782,
 'Logistics': 2765,
 'Logistics (ship building)': 1123,
 'Media & entertainment': 1856,
 'Metals': 44911,
 'Metals (pipes)': 101,
 'Mining & minerals': 19557,
 'Mining (equipment)': 69,
 'NBFC': 66786,
 'Oil & gas': 119641,
 'Packaging': 2817,
 'Paper': 172,
 'Pharma': 40809,
 'Plastics': 2623,
 'Power': 40138,
 'Power - Renewables': -181,
 'Power services': 1445,
 'Real estate': 3115,
 'Retail': -2553,
 'Services': 501,
 'Telecom (Ancillaries)': -4701,
 'Telecom services': -58066,
 'Textiles': 2225,
 'Trading': 2049}
```
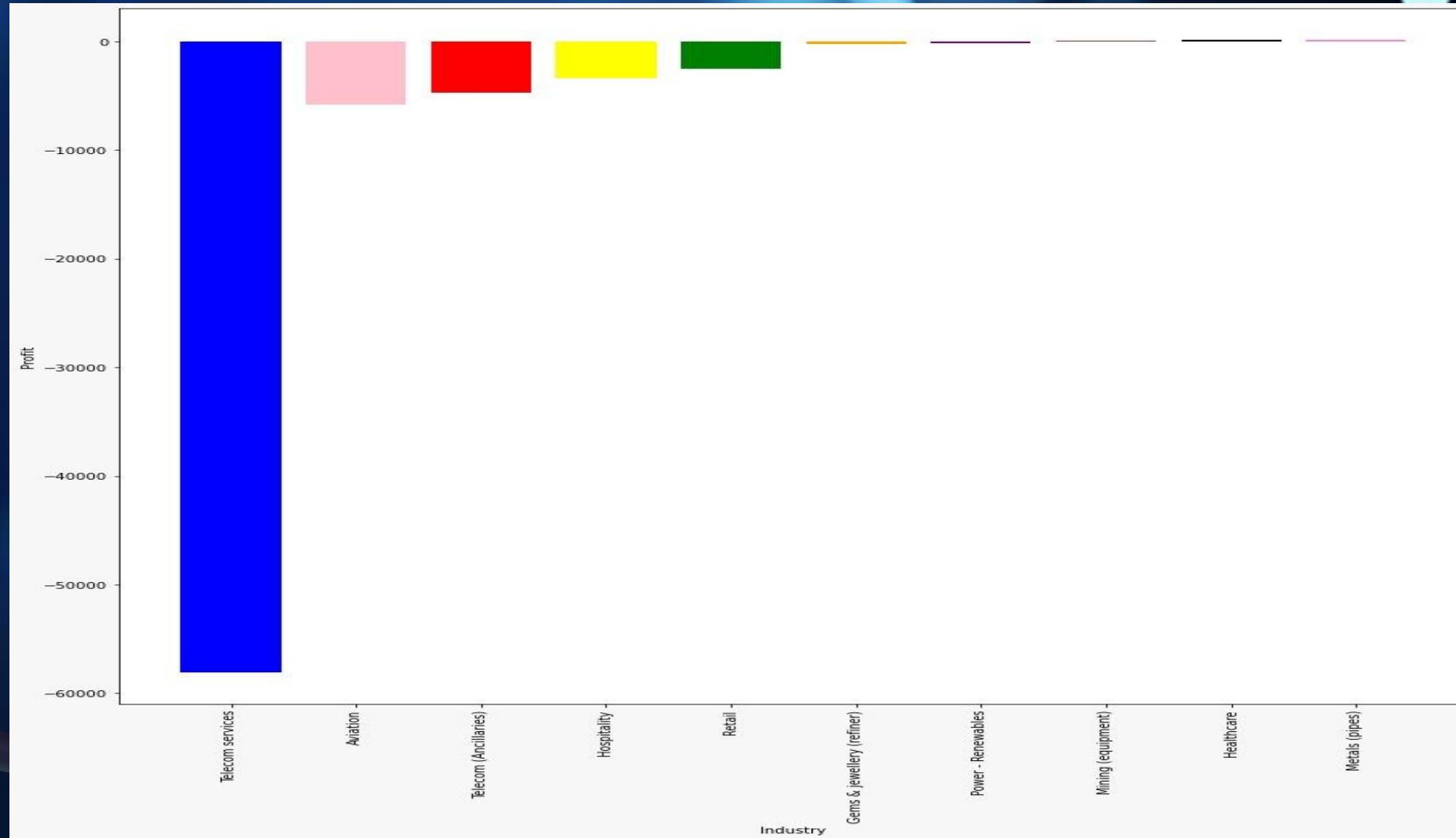
# Bar chart for top 10 Industries based on Profit
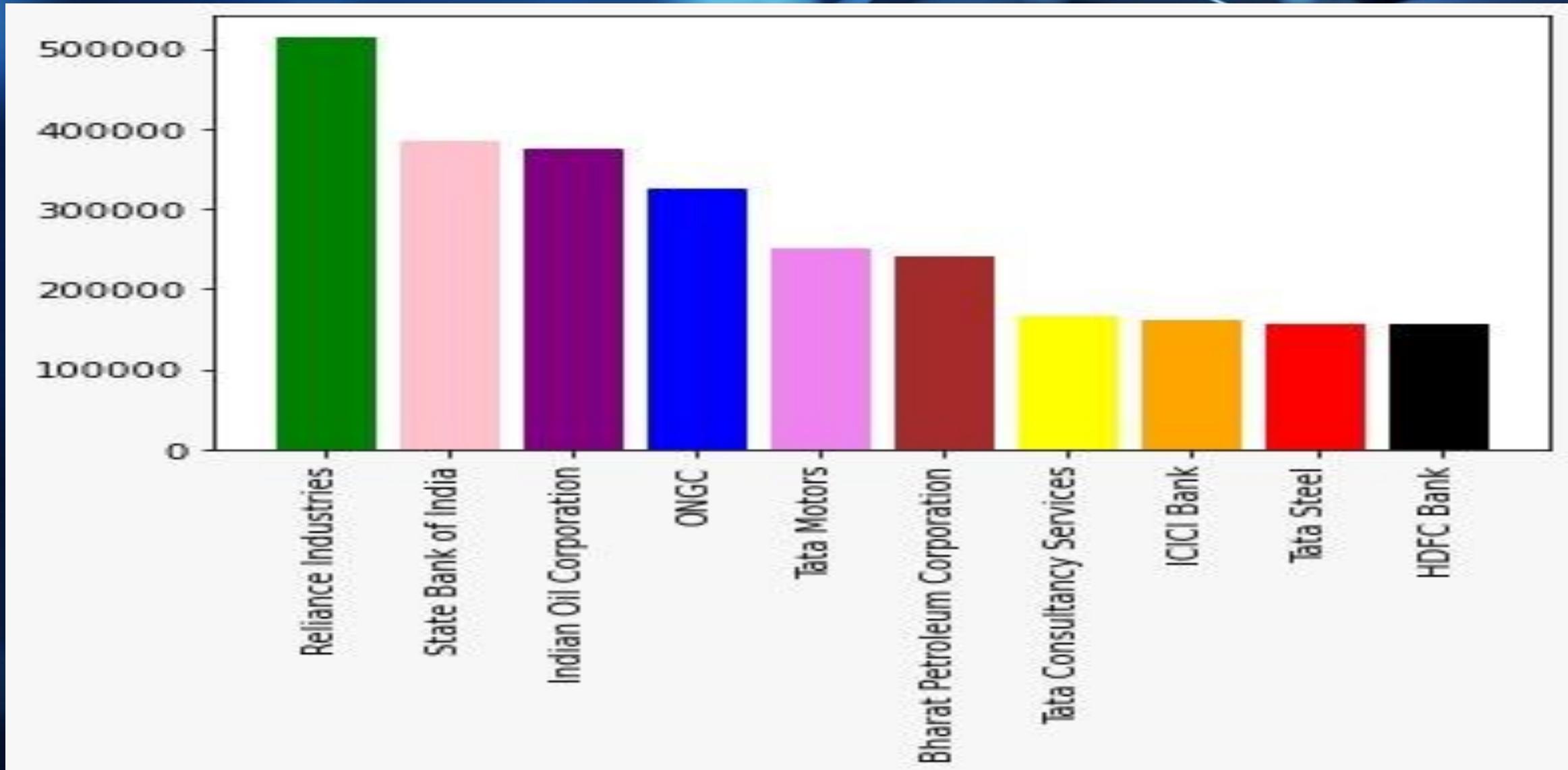
# Pie chart & Box plot for top 10 Industries based on Profit
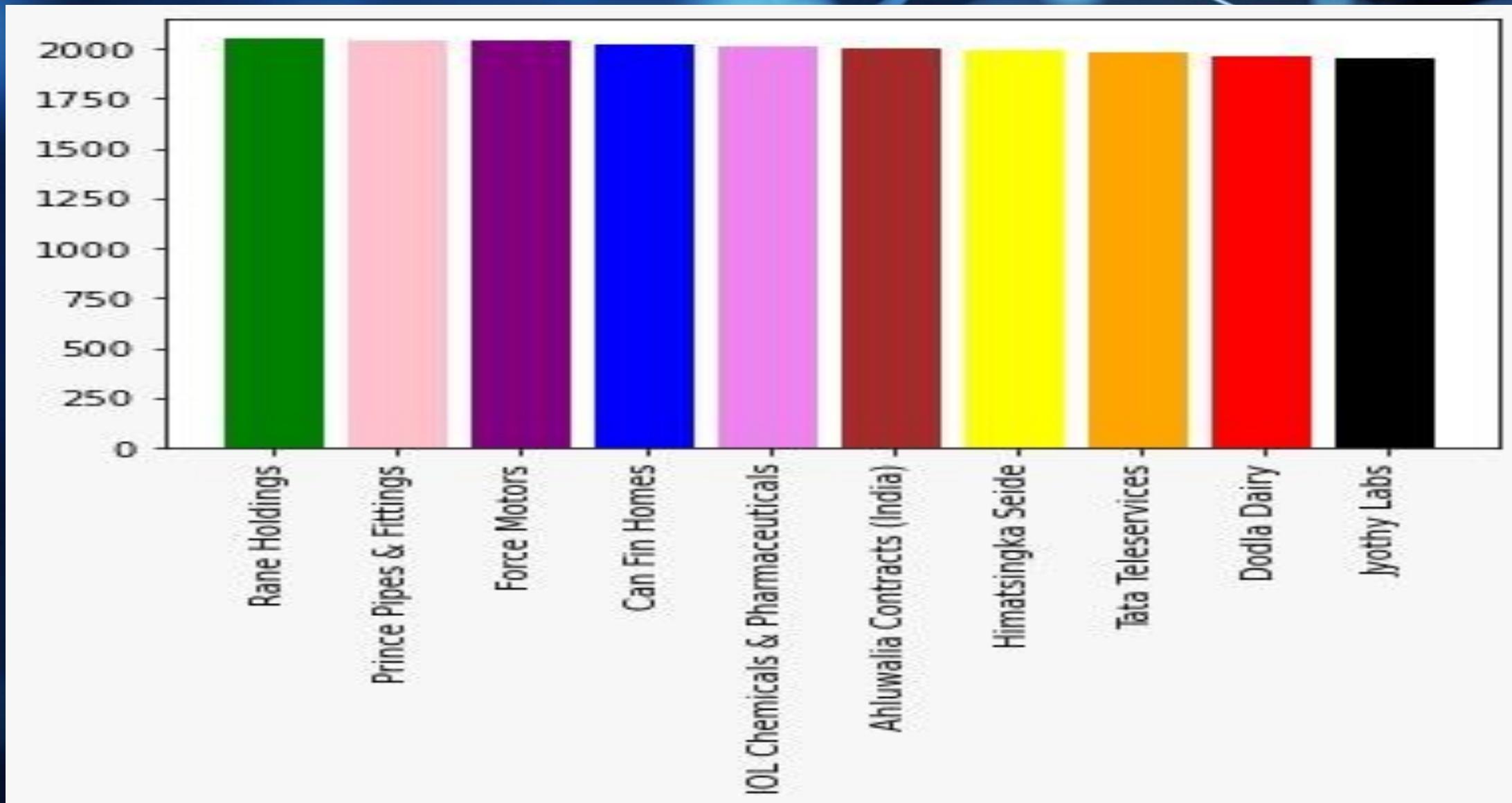
Bar chart for last 10 Industries based on Profit
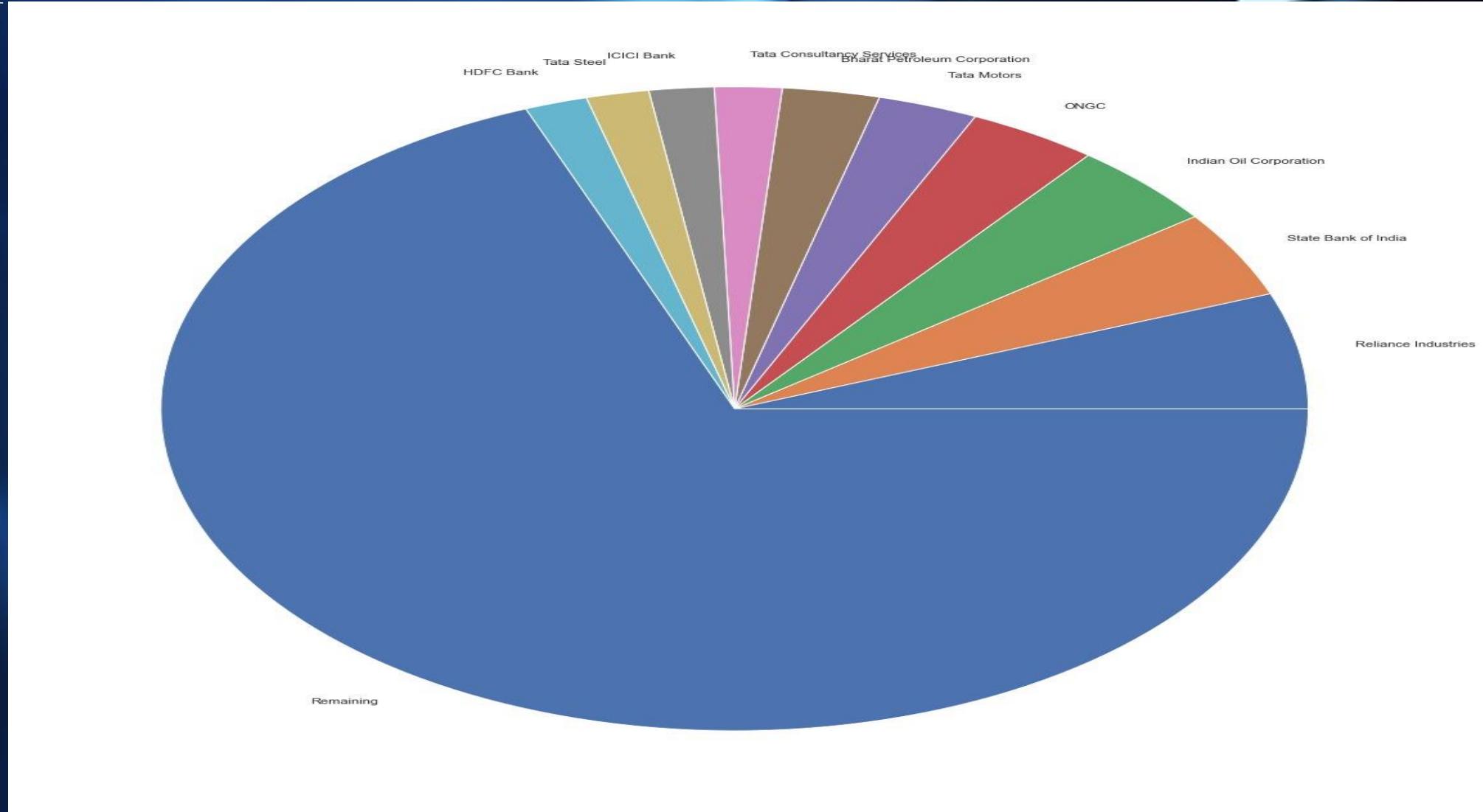
Income of top 10 companies

Income of last 10 companies

Pie chart representing all companies along with top 10 companies income

Conclusion

Using the information from Fortune 500 companies data, We found that banking sector has more profit compared to all the other industries followed by oil & gas and IT services.

Reliance industries with Rs.514217 Cr has the most income and Jyothy labs with Rs.1954 Cr has the least income among income of all 500 companies

Thank You

B. Jayalakshmi

T.Anjusha