Mobile_Phone_Analysis

July 28, 2024

1 *Mobile Phones Selling Analysis (EDA)*

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[1]:
```
#Importing the Necessary Liberaries
import numpy as np
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
```

[2]:
```
#Reading Data
df = pd.read_csv("C:/Users/gargs/Downloads/archive (2)/
 ↪best-selling-mobile-phones.csv")
```

[3]:
```
df.head(5)
```

[3]:

	manufacturer	model	form	smartphone	year	\
0	Nokia	1100	Bar	No	2003	
1	Nokia	1110	Bar	No	2005	
2	Apple	iPhone 6 and iPhone 6 Plus	Touchscreen	Yes	2014	
3	Nokia	105 (2013), 105 (2015)	Bar	No	2013	
4	Apple	iPhone 6S and iPhone 6S Plus	Touchscreen	Yes	2015	

	units_sold_m
0	250.0
1	247.5
2	224.0
3	200.0
4	174.1

[4]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 111 entries, 0 to 110
Data columns (total 6 columns):
 #   Column        Non-Null Count  Dtype
---  ------        --------------  -----
 0   manufacturer  111 non-null    object
 1   model         111 non-null    object
```

```
 2   form          111 non-null    object
 3   smartphone    111 non-null    object
 4   year          111 non-null    int64
 5   units_sold_m  111 non-null    float64
dtypes: float64(1), int64(1), object(4)
memory usage: 5.3+ KB
```

[5]:
```
df.describe()
```

[5]:
```
              year  units_sold_m
count   111.000000    111.000000
mean   2011.864865     50.447748
std       6.147411     59.167349
min    1996.000000      2.000000
25%    2007.000000     10.000000
50%    2012.000000     24.200000
75%    2018.000000     60.000000
max    2021.000000    250.000000
```

1.1 *In this that Our Data has Mobile selling from 1996 to 2021*

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[6]:
```
df["units_sold_m"].describe()
```

[6]:
```
count    111.000000
mean      50.447748
std       59.167349
min        2.000000
25%       10.000000
50%       24.200000
75%       60.000000
max      250.000000
Name: units_sold_m, dtype: float64
```

1.2 *Here in this our sold units are in the range of 2M to 250M.*

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[7]:
```
df.head(10)
```

[7]:

	manufacturer	model	form	\
0	Nokia	1100	Bar	
1	Nokia	1110	Bar	
2	Apple	iPhone 6 and iPhone 6 Plus	Touchscreen	
3	Nokia	105 (2013), 105 (2015)	Bar	
4	Apple	iPhone 6S and iPhone 6S Plus	Touchscreen	
5	Apple	iPhone 5S	Touchscreen	
6	Nokia	3210	Bar	

```
7        Apple                        iPhone 7 and iPhone 7 Plus  Touchscreen
8        Apple  iPhone 11, iPhone 11 Pro and iPhone 11 Pro Max  Touchscreen
9        Apple           iPhone XR, iPhone XS and iPhone XS Max  Touchscreen
```

	smartphone	year	units_sold_m
0	No	2003	250.0
1	No	2005	247.5
2	Yes	2014	224.0
3	No	2013	200.0
4	Yes	2015	174.1
5	Yes	2013	164.5
6	No	1999	161.0
7	Yes	2016	159.9
8	Yes	2019	159.2
9	Yes	2018	151.1

1.3 *Here in this Nokia and Apple is covering the Top 10 Best Mobile Selling Market*

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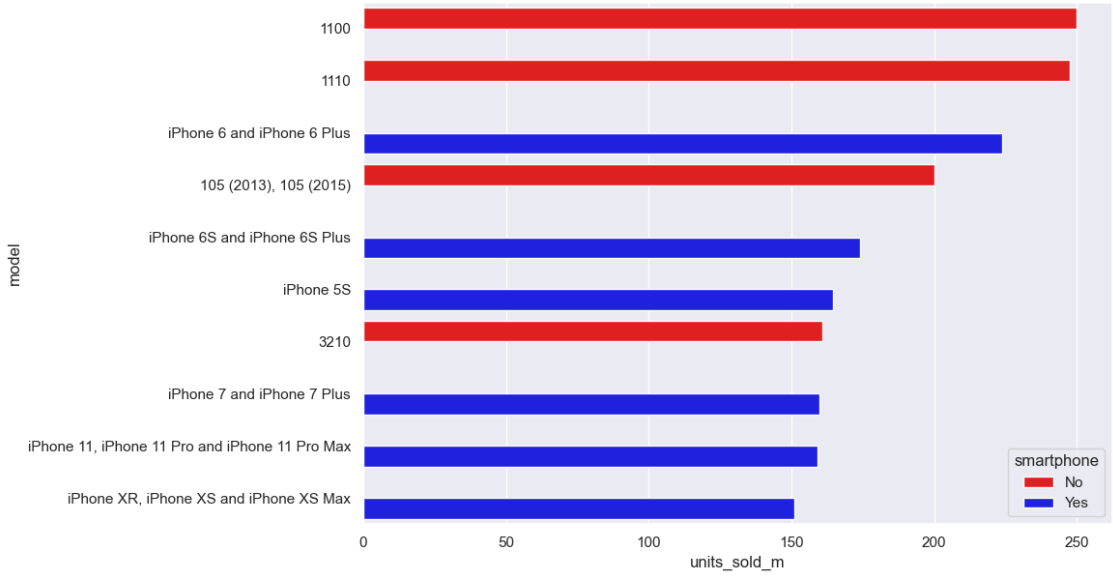
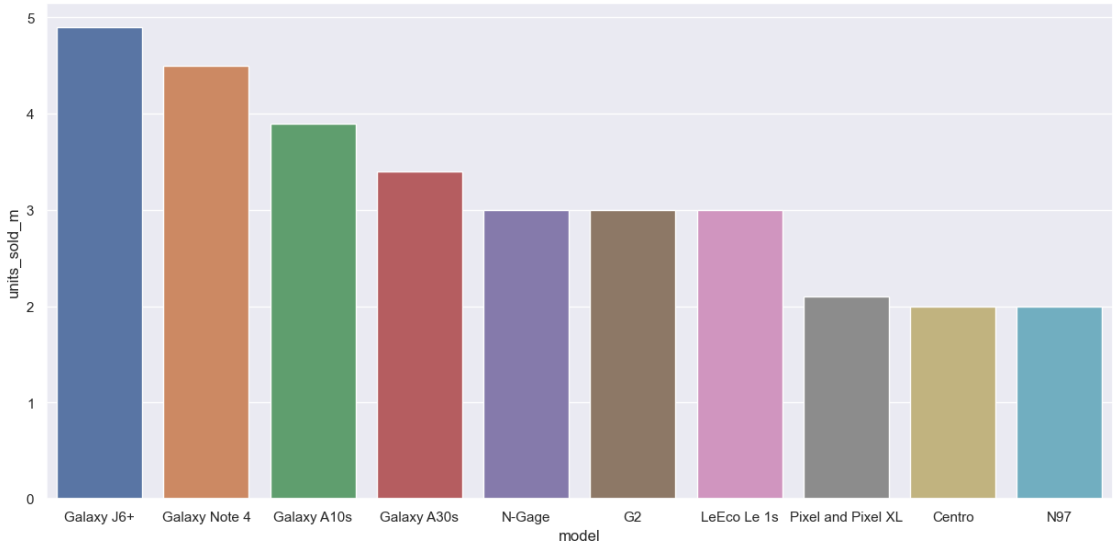
[8]:
```
Top_10 = df.head(10)
```

[9]:
```
sns.set_theme()
plt.figure(figsize = (10,7))
graph = sns.barplot(data = Top_10, x = "units_sold_m", y = "model", hue =␣
 ↪"smartphone",  palette=["Red", "Blue"])
```



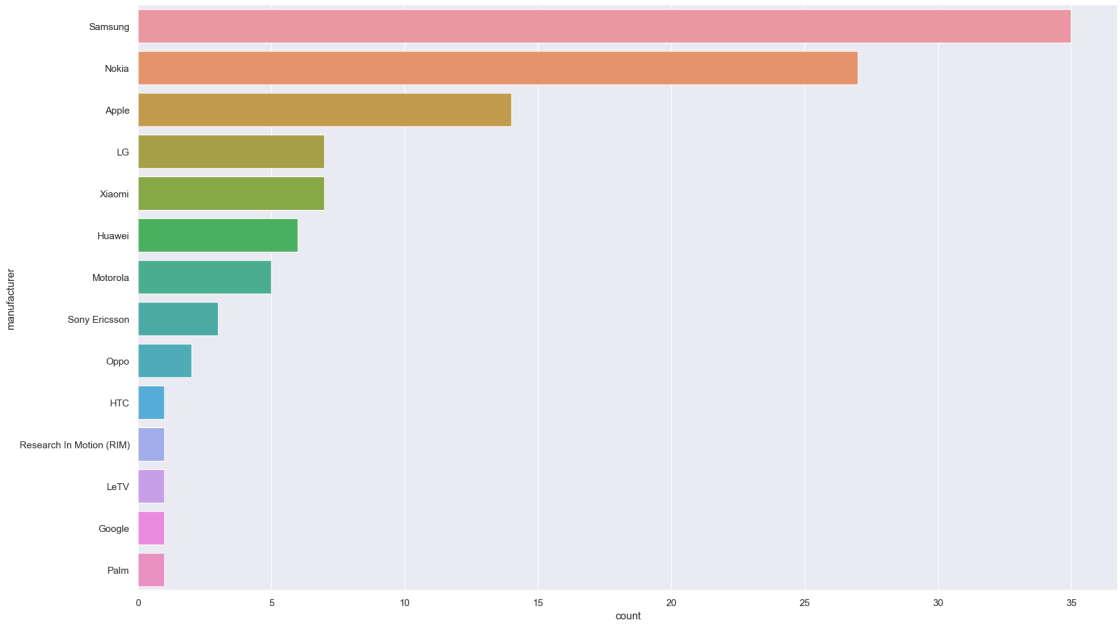
[10]:
```
sns.set_theme()
plt.figure(figsize =(15,7))
sns.barplot(data = df.tail(10), x = "model", y = "units_sold_m")
```

[10]: <Axes: xlabel='model', ylabel='units_sold_m'>



[11]:
```
sns.set_theme()
plt.figure(figsize=(20, 12))
sns.countplot(data = df, y = "manufacturer", order = df["manufacturer"].
 ↪value_counts().index)
```

[11]: <Axes: xlabel='count', ylabel='manufacturer'>



1.4 *In this Volume wise Plotting is done Samsung has the highest selling mobile phones market after that Nokia is in the 2nd Place.*

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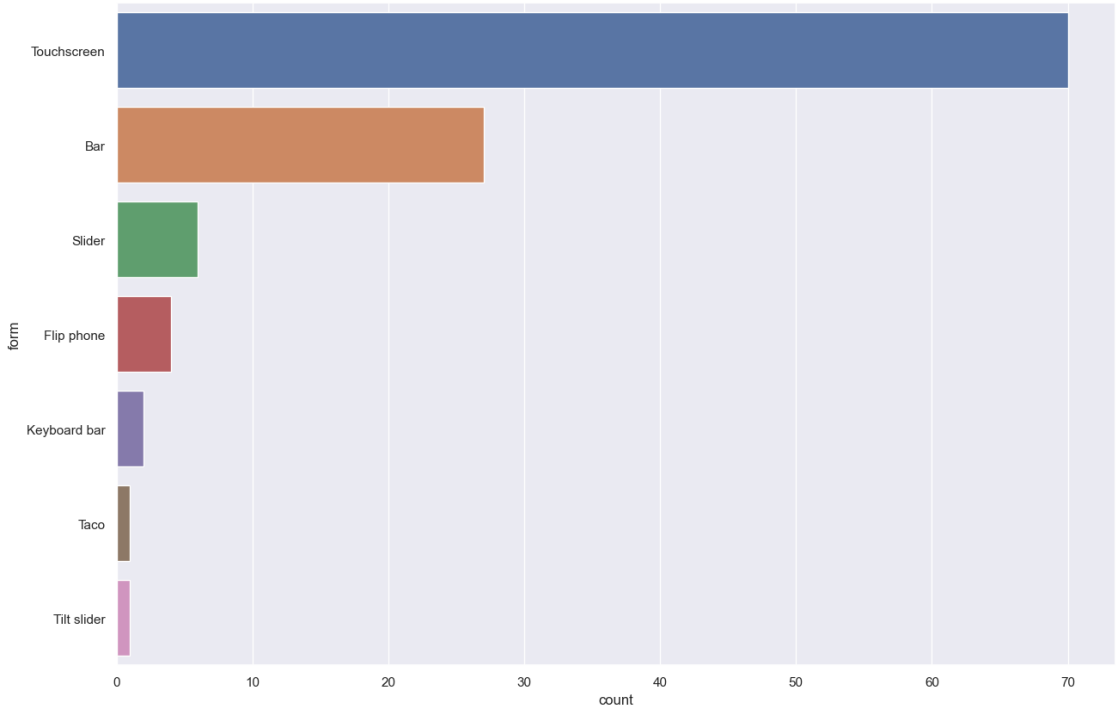
[12]:
```
plt.figure(figsize = (15, 10))
sns.countplot(data = df, y = "form", order = df["form"].value_counts().index)
```

[12]: <Axes: xlabel='count', ylabel='form'>



1.5 ***Here the most selling Mobile Phone type is Touchscreen and it has captured the Most of the Market after that Bar Mobile Phones is in the 2nd Place.***

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[13]:
```
df2 = pd.read_csv("C:/Users/gargs/Downloads/archive (2)/Best Selling Mobile␣
↪Phones 2020.csv")
```

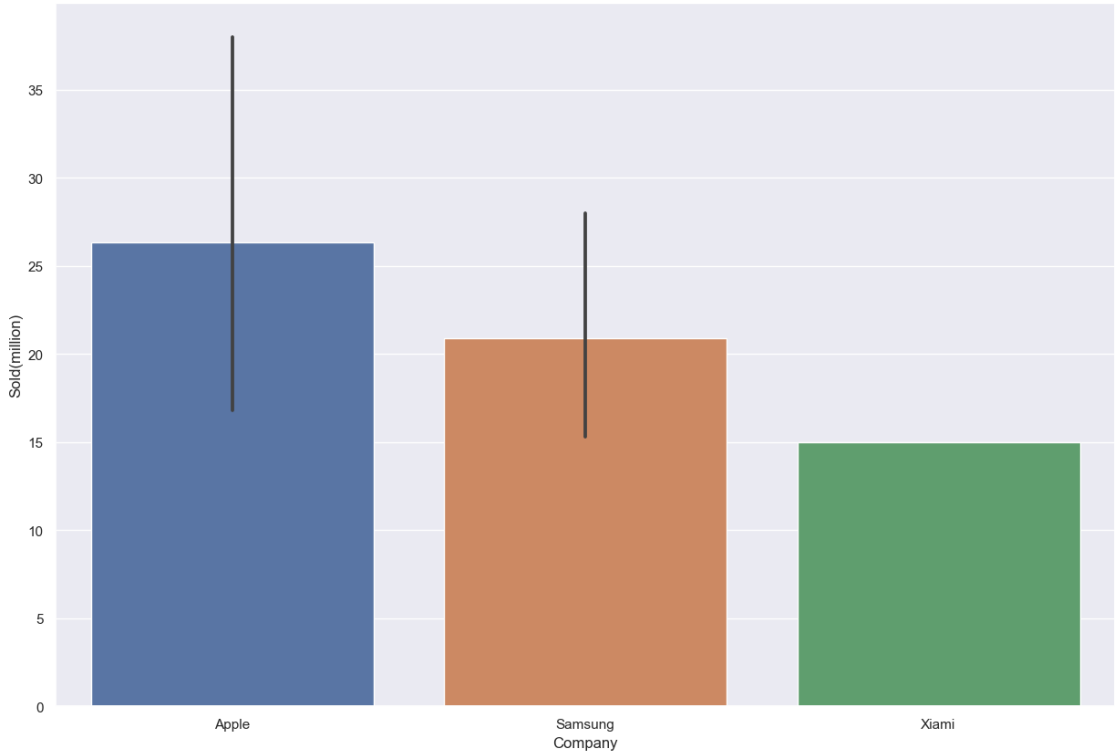
[14]:
```
df2
```

[14]:

	No	Phone	Company	Sold(million)
0	1	iPhone 12 and iPhone 12 Mini	Apple	38.0
1	2	Galaxy S20, S20+, S20 Ultra	Samsung	28.0
2	3	iPhone SE 2nd generation	Apple	24.2
3	4	Galaxy A21s	Samsung	19.4
4	5	iPhone 12 Pro Max	Apple	16.8
5	6	Galaxy A11	Samsung	15.3
6	7	Redmi Note 9 Pro	Xiami	15.0

[15]:
```
plt.figure(figsize=(15, 10))
sns.barplot(data = df2, x = "Company", y = "Sold(million)")
```

[15]:
```
<Axes: xlabel='Company', ylabel='Sold(million)'>
```



1.6 *Here the Most Mobile Phone Selling Company in 2020 is Apple after that Samsung and then Xioami*

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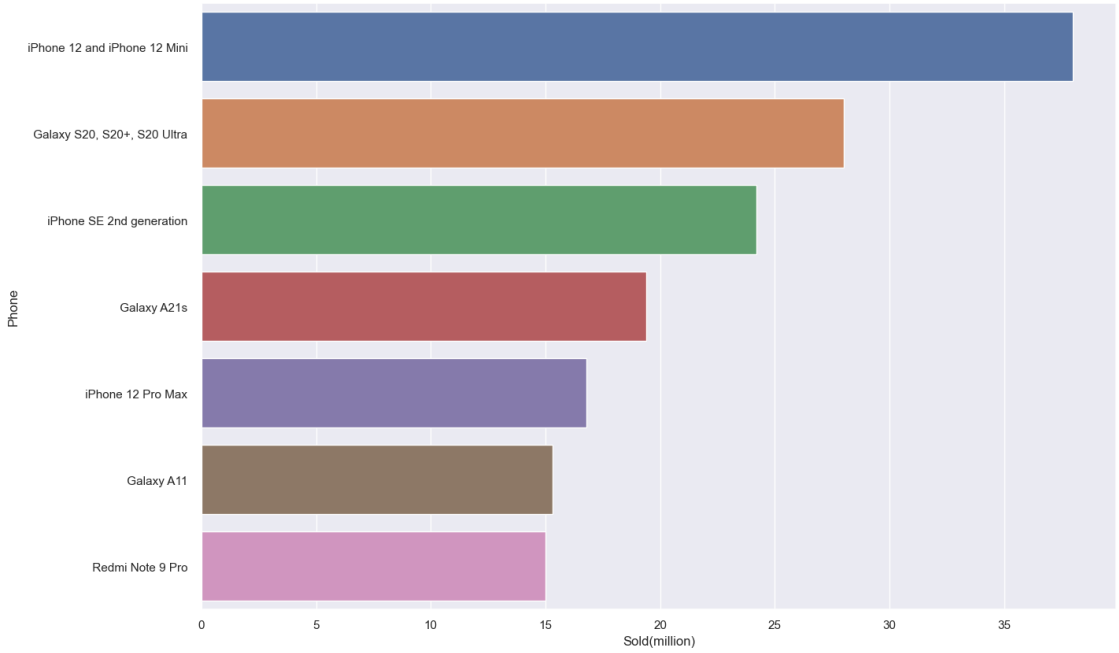
[16]:
```
plt.figure(figsize=(15, 10))
sns.barplot(data = df2, y = "Phone", x = "Sold(million)")
```

[16]: <Axes: xlabel='Sold(million)', ylabel='Phone'>



1.7 ***Here in this IPhone 12 and Iphone 12 mini is the most selling phone in 2020's***

1.8 ***Here is the Conclusion we've covered in the above following:***

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1. ***How many millions of units sold by the individual Manufacturer by the Bar Plot.***

2. ***Units that are sold of the Individual model of Manufacturer by the Bar Plot.***

3. ***The Volume wise plotting of Mobile Phone sold by the Manufacturer by the Count Plot.***

4. ***Types of Form of Mobile Phone sold highest (Touchscreen is the Highest).***

5. ***After that the Most Selling Mobile Phone Manufacturer in 2020 Plot by the Bar Plot (Apple is the Highest).***

6. ***Lastly the Most Selling Mobile Phone in 2020 is Iphone 12 and Iphone 12 Mini which is the Apply Company Model Mobile Phone.***