```
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
```

1. Load the file

```
df=pd.read_csv("/content/2022_forbes_billionaires (2).csv")
```

2. Print first five rows of data

```
df.head()
```

	Unnamed: 0	rank	name	networth	age	country	source	industry
0	0	1	Elon Musk	$219 B	50	United States	Tesla, SpaceX	Automotive
1	1	2	Jeff Bezos	$171 B	58	United States	Amazon	Technology
2	2	3	Bernard Arnault & family	$158 B	73	France	LVMH	Fashion & Retail
3	3	4	Bill Gates	$129 B	66	United States	Microsoft	Technology
4	4	5	Warren Buffett	$118 B	91	United States	Berkshire Hathaway	Finance & Investments

Next steps: Generate code with df | View recommended plots | New interactive sheet

3. Print last five rows of data

```
df.tail()
```

	Unnamed: 0	rank	name	networth	age	country	source	industry
2595	2595	2578	Jorge Gallardo Ballart	$1 B	80	Spain	pharmaceuticals	Healthcare
2596	2596	2578	Nari Genomal	$1 B	82	Philippines	apparel	Fashion & Retail
2597	2597	2578	Ramesh Genomal	$1 B	71	Philippines	apparel	Fashion & Retail
2598	2598	2578	Sunder Genomal	$1 B	68	Philippines	garments	Fashion & Retail
2599	2599	2578	Horst-Otto Gerberding	$1 B	69	Germany	flavors and fragrances	Food & Beverage

4. Check for missing and null values and duplicate data

```
df.columns
```

```
Index(['Unnamed: 0', 'rank', 'name', 'networth', 'age', 'country', 'source',
       'industry'],
      dtype='object')
```

5. Get some info about the data

```
df.info ()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 2600 entries, 0 to 2599
Data columns (total 8 columns):
 #   Column      Non-Null Count  Dtype
---  ------      --------------  -----
 0   Unnamed: 0  2600 non-null   int64
 1   rank        2600 non-null   int64
 2   name        2600 non-null   object
 3   networth    2600 non-null   object
 4   age         2600 non-null   int64
 5   country     2600 non-null   object
 6   source      2600 non-null   object
 7   industry    2600 non-null   object
dtypes: int64(3), object(5)
memory usage: 162.6+ KB
```

6. Get some describtion about data

```
df.describe()
```

	Unnamed: 0	rank	age
count	2600.000000	2600.000000	2600.000000
mean	1299.500000	1269.570769	64.271923
std	750.699674	728.146364	13.220607
min	0.000000	1.000000	19.000000
25%	649.750000	637.000000	55.000000
50%	1299.500000	1292.000000	64.000000
75%	1949.250000	1929.000000	74.000000
max	2599.000000	2578.000000	100.000000

7. Get some shape of the data

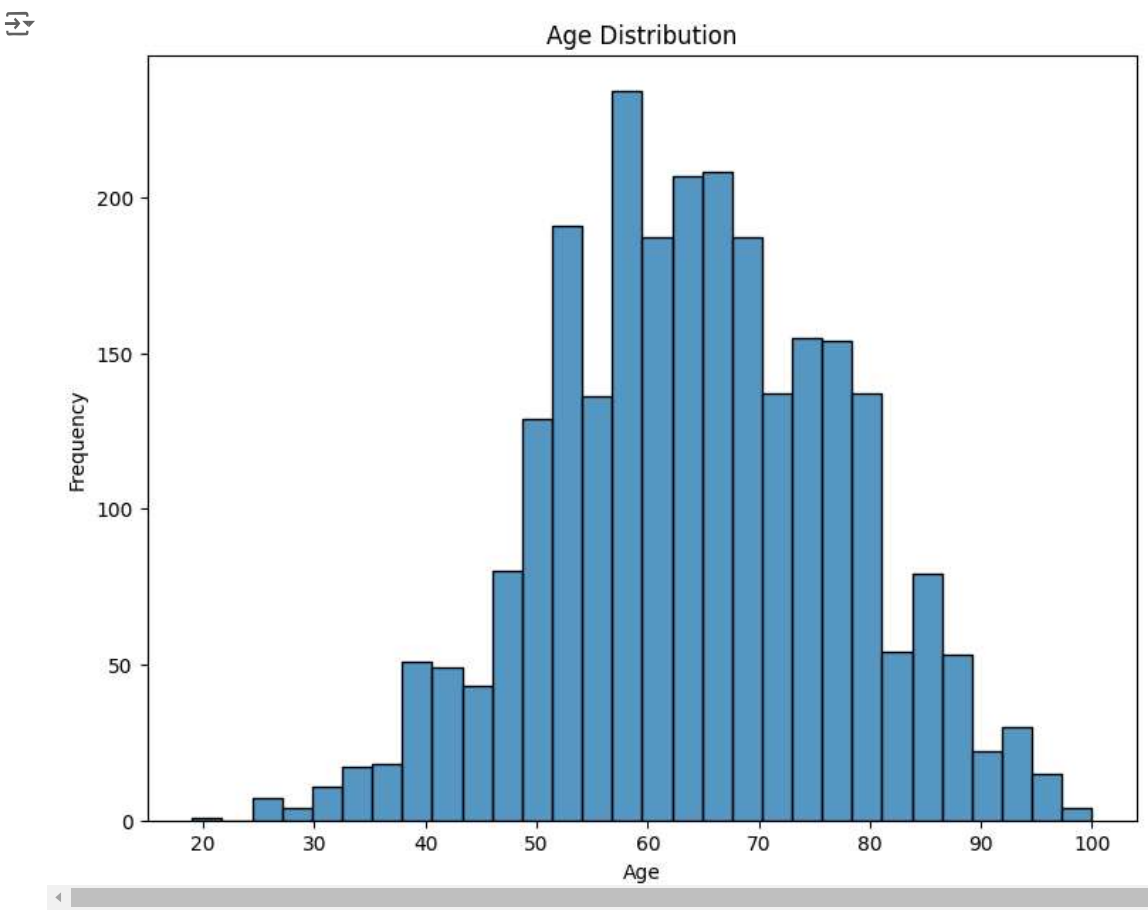
```
print(df.shape)
```

```
(2600, 8)
```

Visualization

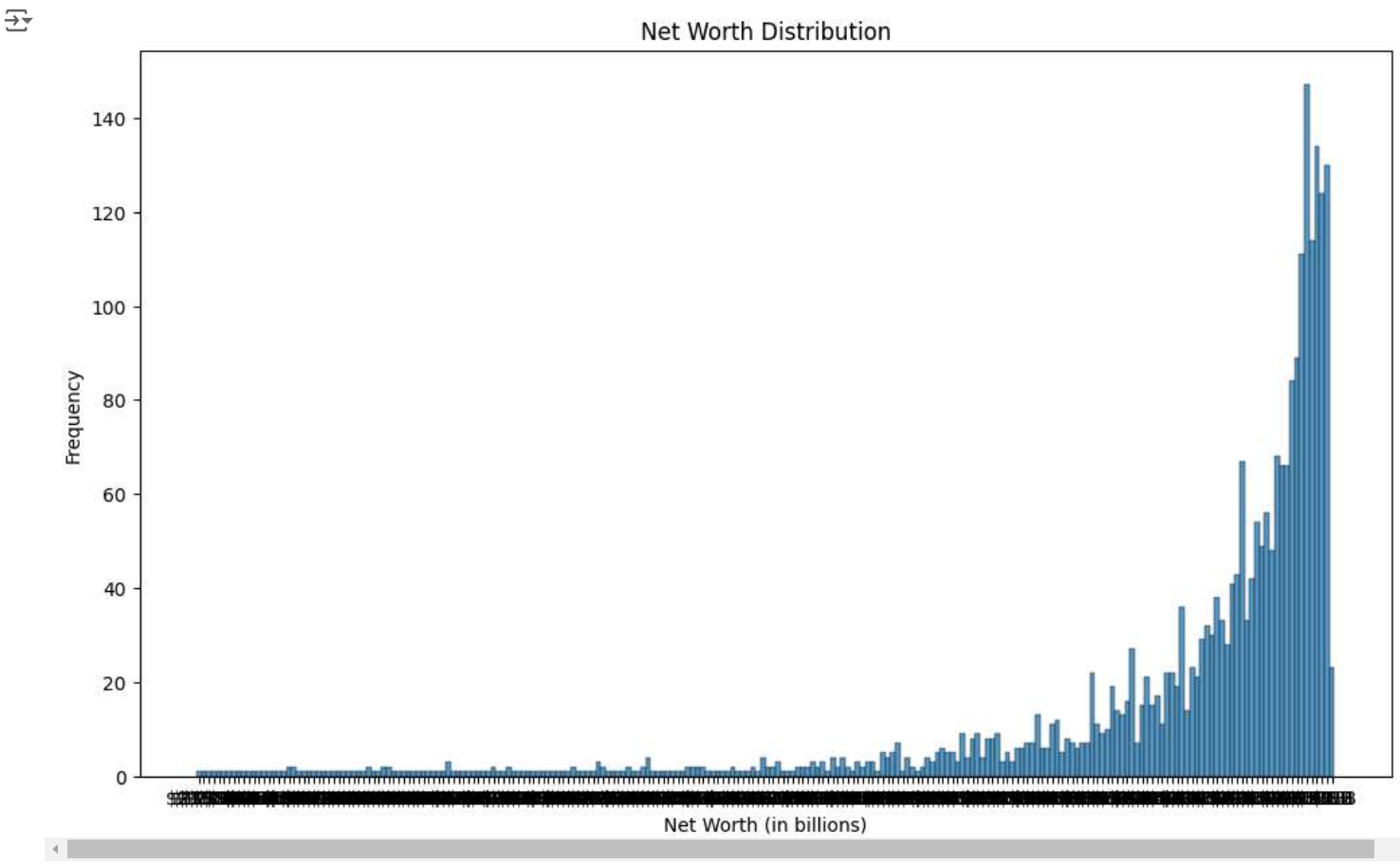
1. Show the Age distribution among the data using bar plot

```
plt.figure(figsize=(9, 7))
sns.histplot(df['age'], bins=30, kde=False)
plt.title('Age Distribution')
plt.xlabel('Age')
plt.ylabel('Frequency')
plt.show()
```



2. Show the Net Worth vs Frequency using barplot

```
plt.figure(figsize=(12, 7))
sns.histplot(df['networth'], bins=30, kde=False)
plt.title('Net Worth Distribution')
plt.xlabel('Net Worth (in billions)')
plt.ylabel('Frequency')
plt.show()
```




```
df.columns
```

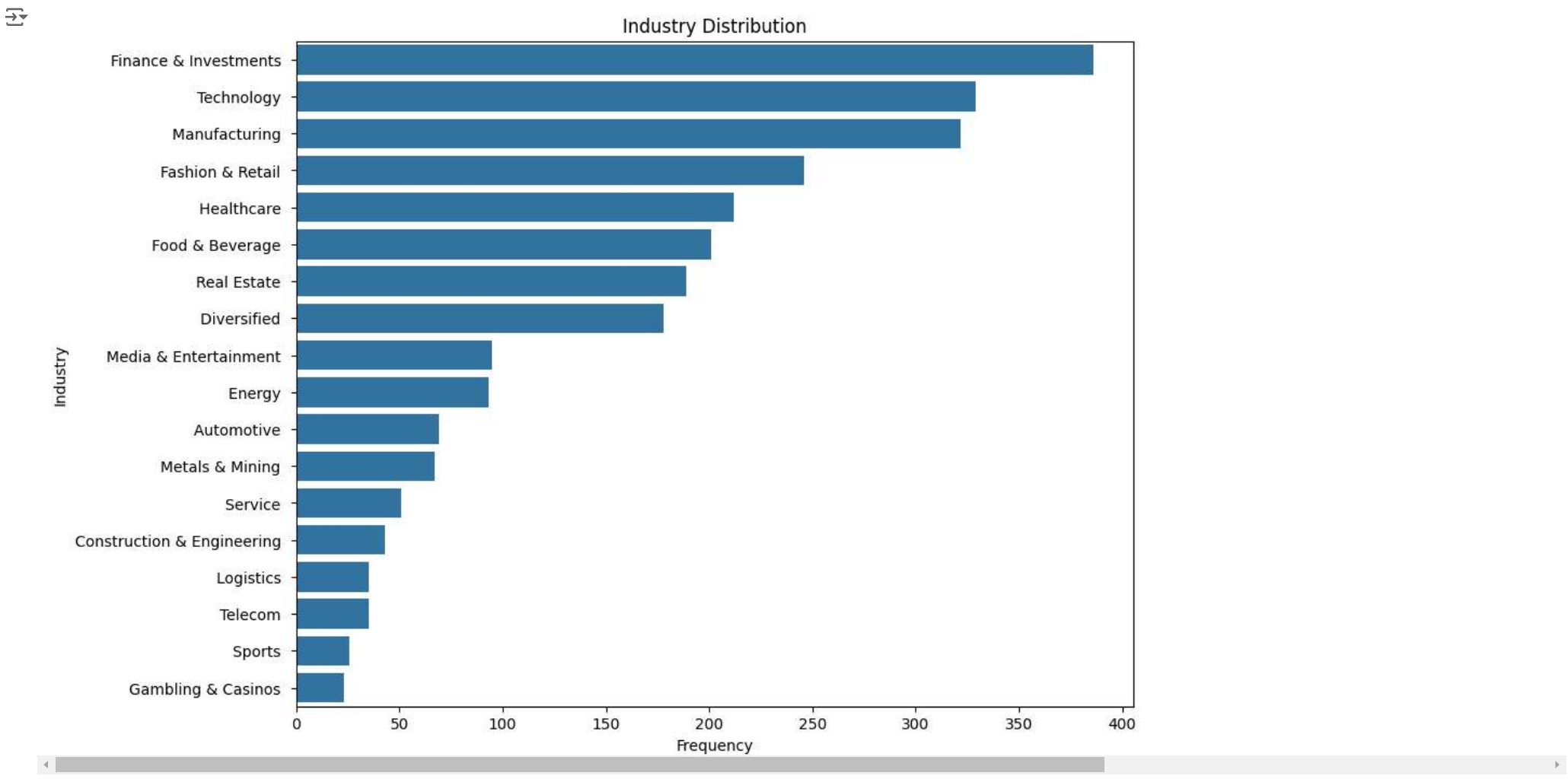
```
Index(['Unnamed: 0', 'rank', 'name', 'networth', 'age', 'country', 'source',
       'industry'],
      dtype='object')
```

3. Show Industry vs Frequency using bar plot

Double-click (or enter) to edit

```
plt.figure(figsize=(10, 8))
sns.countplot(y='industry', data=df, order=df['industry'].value_counts().index)
plt.title('Industry Distribution')
plt.xlabel('Frequency')
plt.ylabel('Industry')
```

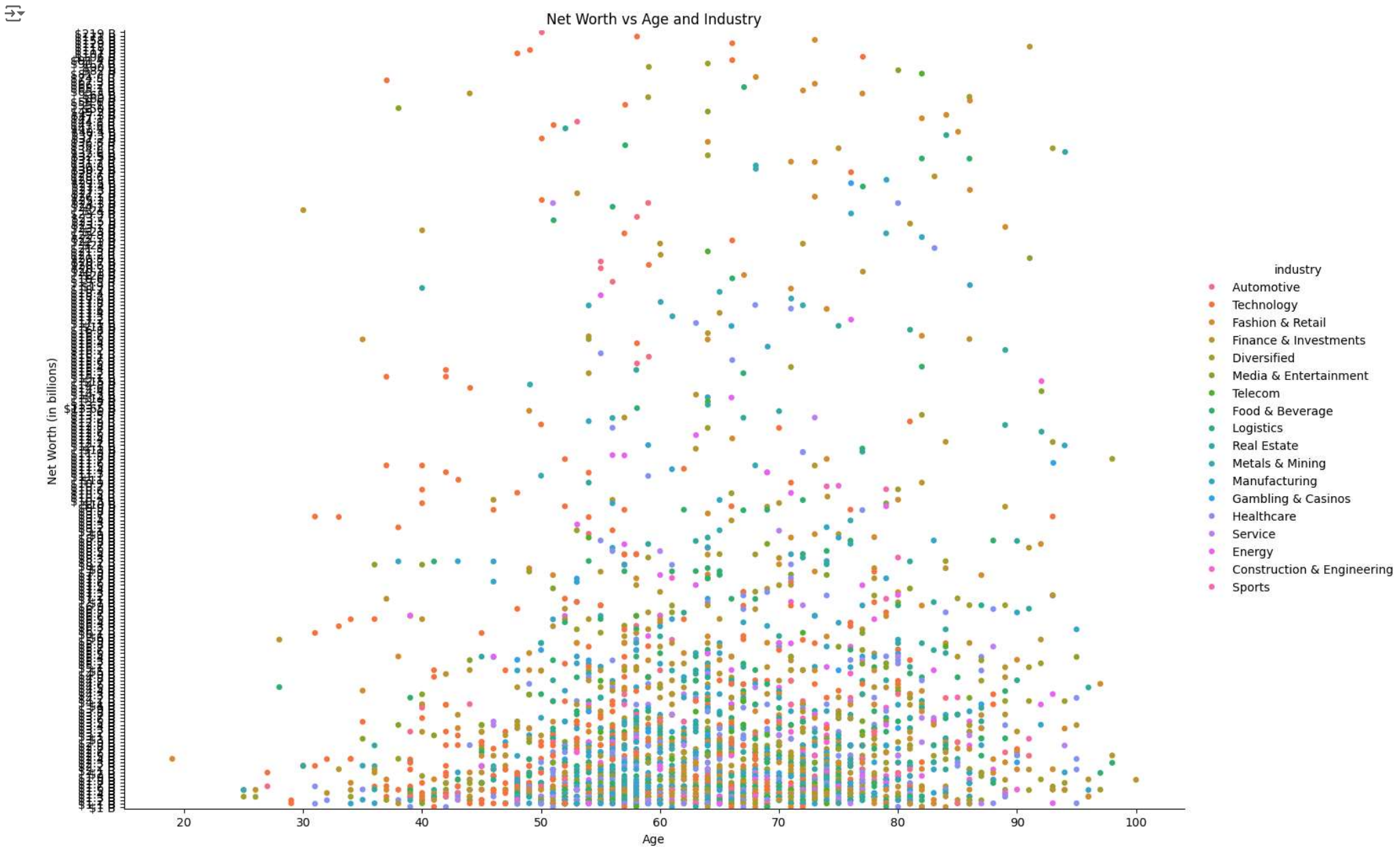
```
plt.show()
```



4. Show the how does Net worth Change with age and industry using cat plot

```
import seaborn as sns
import matplotlib.pyplot as plt

# Assuming 'data' is your DataFrame
sns.catplot(x='age', y='networth', hue='industry', data=df, kind='strip', height=10, aspect=1.4)
plt.title('Net Worth vs Age and Industry')
plt.xlabel('Age')
plt.ylabel('Net Worth (in billions)')
plt.show()
```



Double-click (or enter) to edit

5. Show the top 10 richest people vs net worth

Double-click (or enter) to edit

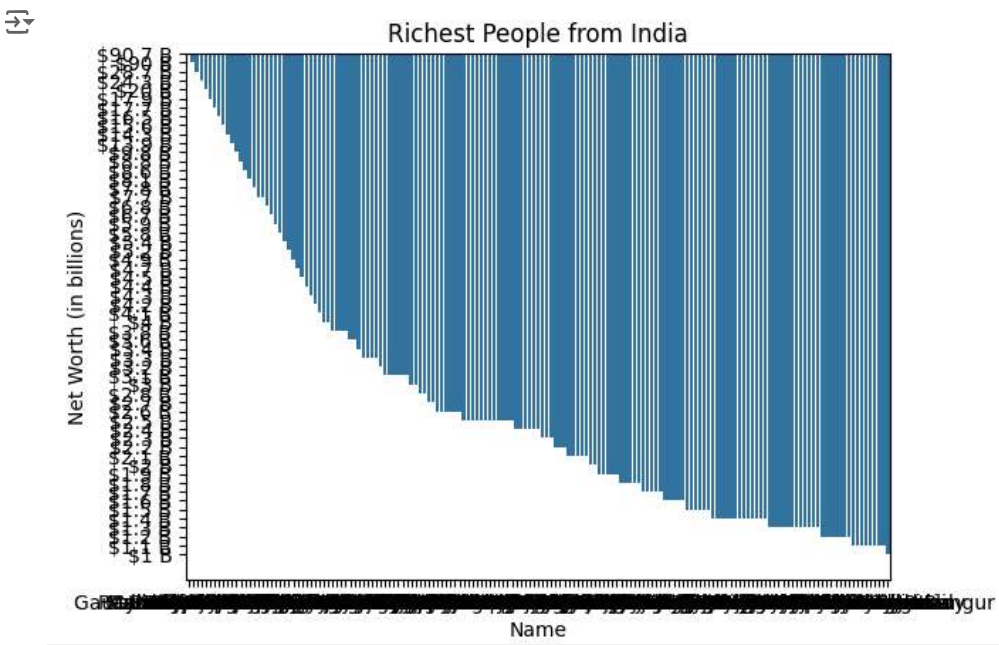
```
df[['name', 'networth']].head(10)
```

	name	networth
0	Elon Musk	$219 B
1	Jeff Bezos	$171 B
2	Bernard Arnault & family	$158 B
3	Bill Gates	$129 B
4	Warren Buffett	$118 B
5	Larry Page	$111 B
6	Sergey Brin	$107 B
7	Larry Ellison	$106 B
8	Steve Ballmer	$91.4 B
9	Mukesh Ambani	$90.7 B

Double-click (or enter) to edit

6. Show the richest people from india with the names in any plot

```
india_richestpeople = df[df['country'] == 'India']
india_richestpeople[['name', 'networth']]
sns.barplot(x='name', y='networth', data=india_richestpeople)
plt.title('Richest People from India')
plt.xlabel('Name')
plt.ylabel('Net Worth (in billions)')
plt.show()
```



7. Show the minimum age billionare <=50 with name name and industry

```
young_billionaires = df[df['age'] <= 50]
young_billionaires[['name', 'age', 'industry']]
```

	name	age	industry
0	Elon Musk	50	Automotive
5	Larry Page	49	Technology
6	Sergey Brin	48	Technology
14	Mark Zuckerberg	37	Technology
19	Changpeng Zhao	44	Finance & Investments
...	...	...	...
2567	Vlad Yatsenko	38	Finance & Investments
2570	Yu Rong	50	Healthcare
2579	Johanna Braun	42	Healthcare
2580	Karl Friedrich Braun	39	Healthcare
2587	Doug Clarke	41	Technology

359 rows × 3 columns

8. Show in which industry billionare are more:-

```
top_industry = df['industry'].value_counts().idxmax()
print(f'Industry with the most billionaires: {top_industry}')
```

```
Industry with the most billionaires: Finance & Investments
```