EDA_On_Richest_People_over_Globe

June 27, 2025

1 Exploratory Data Analysis On The Richest_People Dataset Across Globe

1.1 Data Pre-processing & Cleaning

[7]:
```
# Import section :
import numpy as np # linear algebra
import pandas as pd # Data Pre-processing, CSV file I/O
```

1.1.1 Data Pre-peocessing

[8]:
```
# DataSet Load Section :
data = pd.read_csv("500 richest people 2021.csv",delimiter=';')
data
```

[8]:
```
      Rank             Name Total Net Worth $ Last Change $ YTD Change  \
0      1.0       Jeff Bezos           $188B       +$1.68B     -$2.31B
1      2.0        Elon Musk           $170B       -$2.89B      +$773M
2      3.0  Bernard Arnault           $155B        +$892M     +$40.9B
3      4.0       Bill Gates           $144B       -$1.32B     +$12.2B
4      5.0  Mark Zuckerberg           $114B        +$203M     +$10.9B
..     …              …            …            …          …
498  500.0       Odd Reitan          $5.72B       -$19.9M        +$669M
499    NaN              NaN             NaN           NaN            NaN
500    NaN              NaN             NaN           NaN            NaN
501    NaN              NaN             NaN           NaN            NaN
502    NaN              NaN             NaN           NaN            NaN

           Country         Industry  Unnamed: 7  Unnamed: 8  Unnamed: 9  \
0    United States       Technology         NaN         NaN         NaN
1    United States       Technology         NaN         NaN         NaN
2           France         Consumer         NaN         NaN         NaN
3    United States       Technology         NaN         NaN         NaN
4    United States       Technology         NaN         NaN         NaN
..               …              …         …          …          …
498         Norway  Food & Beverage         NaN         NaN         NaN
499            NaN              NaN         NaN         NaN         NaN
```

```
500            NaN              NaN         NaN         NaN         NaN
501            NaN              NaN         NaN         NaN         NaN
502            NaN              NaN         NaN         NaN         NaN

     Unnamed: 10
0            NaN
1            NaN
2            NaN
3            NaN
4            NaN
..           …
498          NaN
499          NaN
500          NaN
501          NaN
502          NaN

[503 rows x 11 columns]
```

[9]:

```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 503 entries, 0 to 502
Data columns (total 11 columns):
 #   Column           Non-Null Count  Dtype
---  ------           --------------  -----
 0   Rank             499 non-null    float64
 1   Name             499 non-null    object
 2   Total Net Worth  499 non-null    object
 3   $ Last Change    499 non-null    object
 4   $ YTD Change     499 non-null    object
 5   Country          499 non-null    object
 6   Industry         499 non-null    object
 7   Unnamed: 7       0 non-null      float64
 8   Unnamed: 8       0 non-null      float64
 9   Unnamed: 9       0 non-null      float64
 10  Unnamed: 10      0 non-null      float64
dtypes: float64(5), object(6)
memory usage: 43.4+ KB
```

[11]:

```
data.head()
```

[11]:

```
   Rank             Name Total Net Worth $ Last Change $ YTD Change  \
0   1.0       Jeff Bezos           $188B       +$1.68B      -$2.31B
1   2.0        Elon Musk           $170B       -$2.89B       +$773M
2   3.0  Bernard Arnault           $155B        +$892M      +$40.9B
3   4.0       Bill Gates           $144B       -$1.32B      +$12.2B
4   5.0  Mark Zuckerberg           $114B        +$203M      +$10.9B
```

```
         Country    Industry  Unnamed: 7  Unnamed: 8  Unnamed: 9  Unnamed: 10
0  United States  Technology         NaN         NaN         NaN          NaN
1  United States  Technology         NaN         NaN         NaN          NaN
2         France    Consumer         NaN         NaN         NaN          NaN
3  United States  Technology         NaN         NaN         NaN          NaN
4  United States  Technology         NaN         NaN         NaN          NaN
```

```
[12]: data.tail()
```

```
[12]:       Rank        Name Total Net Worth $ Last Change $ YTD Change Country  \
      498  500.0  Odd Reitan          $5.72B       -$19.9M       +$669M  Norway
      499    NaN         NaN             NaN           NaN          NaN     NaN
      500    NaN         NaN             NaN           NaN          NaN     NaN
      501    NaN         NaN             NaN           NaN          NaN     NaN
      502    NaN         NaN             NaN           NaN          NaN     NaN

                  Industry  Unnamed: 7  Unnamed: 8  Unnamed: 9  Unnamed: 10
      498  Food & Beverage         NaN         NaN         NaN          NaN
      499              NaN         NaN         NaN         NaN          NaN
      500              NaN         NaN         NaN         NaN          NaN
      501              NaN         NaN         NaN         NaN          NaN
      502              NaN         NaN         NaN         NaN          NaN
```

```
[14]: data.drop(['Unnamed: 7','Unnamed: 8','Unnamed: 9','Unnamed:␣
       ↪10'],axis='columns',inplace=True) #Remove columns or delete
```

```
[15]: data.head()
```

```
[15]:    Rank             Name Total Net Worth $ Last Change $ YTD Change  \
      0   1.0       Jeff Bezos           $188B       +$1.68B      -$2.31B
      1   2.0        Elon Musk           $170B       -$2.89B       +$773M
      2   3.0  Bernard Arnault           $155B        +$892M      +$40.9B
      3   4.0       Bill Gates           $144B       -$1.32B      +$12.2B
      4   5.0  Mark Zuckerberg           $114B        +$203M      +$10.9B

               Country    Industry
      0  United States  Technology
      1  United States  Technology
      2         France    Consumer
      3  United States  Technology
      4  United States  Technology
```

1.1.2 Data Cleaning

```
[16]: data.isnull().sum()  #Check the null values present in the dataset
```

```
[16]: Rank                0
      Name                4
      Total Net Worth     4
      $ Last Change       4
      $ YTD Change        4
      Country             4
      Industry            4
      dtype: int64
```

```
[17]: data.dropna(axis=0, inplace=True)  #It removes null values
```

```
[18]: data.isnull().sum()
```

```
[18]: Rank                0
      Name                0
      Total Net Worth     0
      $ Last Change       0
      $ YTD Change        0
      Country             0
      Industry            0
      dtype: int64
```

```
[29]: data.Name.unique() #It returns unique names in the Name column from the dataset
```

```
[29]: array(['JeffBezos', 'ElonMusk', 'BernardArnault', 'BillGates',
             'MarkZuckerberg', 'WarrenBuffett', 'LarryPage', 'SergeyBrin',
             'LarryEllison', 'SteveBallmer', 'FrancoiseBettencourtMeyers',
             'AmancioOrtega', 'MukeshAmbani', 'CharlesKoch',
             'JuliaFlesherKoch&Family', 'ZhongShanshan', 'GautamAdani',
             'JimWalton', 'RobWalton', 'AliceWalton', 'MaHuateng',
             'MacKenzieScott', 'CarlosSlim', 'FrancoisPinault',
             'PhilKnight&Family', 'MichaelDell', 'JackMa',
             'JacquelineBadgerMars', 'JohnMars', 'ZhangYiming', 'ColinHuang',
             'AlainWertheimer', 'GerardWertheimer', 'TadashiYanai',
             'LenBlavatnik', 'GiovanniFerrero&Family', 'MiriamAdelson',
             'Klaus-MichaelKuehne', 'MasayoshiSon', 'WilliamDing',
             'VladimirPotanin', 'LiKa-shing', 'ZengYuqun', 'YangHuiyan',
             'AzimPremji', 'HeXiangjian', 'GinaRinehart', 'LeonardLauder',
             'DanGilbert', 'QinYinglin', 'JamesDyson', 'VladimirLisin',
             'JimRatcliffe', 'AlexeyMordashov', 'LeonidMikhelson',
             'TakemitsuTakizaki', 'StephenSchwarzman', 'PallonjiMistry',
             'PangKang', 'LeonardoDelVecchio', 'DieterSchwarz',
             'AbigailJohnson', 'JiangRensheng', 'IrisFontbona&Family',
             "JorgePauloLemann'", 'SusanneKlatten', 'ZhangZhidong',
             'JamesSimons', 'StefanPersson', 'AndrewForrest', 'LiXiting',
             'LeiJun', 'LeeShauKee', 'EricSchmidt', 'ShivNadar', 'HenryCheng',
             'KenGriffin', 'CarlIcahn', 'ElaineMarshall', 'LaurenePowellJobs',
             'JohnMenard', 'GohChengLiang', 'ThomasPeterffy', 'StefanQuandt',
             'SaraMotadeLarrea&Family', 'AlisherUsmanov', 'LakshmiMittal',
             'RobertKuok', 'LukasWalton', 'ErnestoBertarelli&Family',
             'HuiKaYan', 'PeterWoo', 'DonaldNewhouse', 'ChenBang', 'XuHang',
             'VagitAlekperov', 'LuiChe-Woo', 'RomanAbramovich', 'ThomasFrist',
             'GennadyTimchenko', 'WangXing', 'DietrichMateschitz', 'WangWei',
             'DustinMoskovitz', 'LeeManTat', 'CharlenedeCarvalho-Heineken',
             'AndreyMelnichenko', 'ViktorVekselberg', 'RayDalio',
             'ReinholdWuerth', 'ThomasStruengmann', 'AndreasStruengmann',
             'AlwaleedBinTalal', 'EduardoSaverin', 'WuYajun', 'ZhongHuijuan',
             'SunPiaoyang', 'GustafDouglas&Family', 'AlikoDangote',
             'RichardLiu', 'LiShuFu', 'CyrusPoonawalla', 'BudiHartono',
             'HassoPlattner', 'WangWenyin', 'ErnieGarcia', 'NedJohnsonIII',
             'CharoenSirivadhanabhakdi', 'DonaldBren', 'RicardoSalinas',
             'PatrickSoon-Shiong', 'PhilipAnschutz', 'RadhakishanDamani',
             'MichaelHartono', 'MaJianrong', 'JorgeMoll&Family', 'CharlesErgen',
             'DaveDuffield', 'EricYuan', 'UdayKotak', 'DavidTepper',
             'KarlAlbrechtJr.', 'BeateHeister', 'ZuoHui', 'JimGoodnight',
             'PatrickDrahi', 'SuHua', 'HuangShilin', 'ScottFarquhar',
             'MikeCannon-Brookes', 'MikhailFridman', 'RobinLi', 'ChenZhiping',
             'MikhailProkhorov', 'JensenHuang', 'FanHongwei', 'JimDavis',
             'JosephTsai', 'HughGrosvenor', 'AlejandroSantoDomingo&Family',
             'CenJunda', 'JanKoum', 'WangJianlin', 'ZhouQunfei',
             'VictorRashnikov', 'RaymondKwok', 'ForrestLi', 'SherryBrydson',
             'DangYanbao', 'LeeJae-Yong&Family', 'PaoloRocca&Family',
             'WuShaoxun', 'WangChuan-Fu', 'CarlCook', 'JackDorsey',
             'RobertPera', 'LengYou-Bin', 'MelkerSchorling', 'CharlesSchwab',
             'BrianChesky', 'MarcelTelles', 'ThomasKwok', 'DilipShanghvi',
             'PierreOmidyar', 'SavitriJindal', 'GongHongjia', 'BrianArmstrong',
             'LiuYongxing', 'PatrickCollison', 'JohnCollison', 'HarryTriguboff',
             'GordonMoore', 'MickyArison', 'ChengYixiao', 'MarijkeMars',
             'VictoriaMars', 'PamelaMars-Wright', 'ValerieMars', 'EyalOfer',
             'StefanoPessina', 'HeinrichDeichmann&Family', 'DavidSun', 'JohnTu',
             'AndersHolchPovlsen&Family', 'BobbyMurphy', 'GraemeHart',
             'LeonBlack', 'DavidGeffen', 'SteveCohen', 'DmitryRybolovlev',
             'DingShizhong', 'EmmanuelBesnier', 'LiuYonghao', 'WeiJianjun',
             'ReinholdSchmieding', 'CarlosSicupira', 'FrankWang', 'LiShuirong',
             'PhamNhatVuong', 'MichaelKadoorie', 'DingShijia', 'SeoJung-Jin',
             'StanDruckenmiller', 'KumarBirla', 'KimJung-Ju', 'GeorgSchaeffler',
             'RinatAkhmetov', 'BlairParry-Okeden', 'JimKennedy',
             'SuleimanKerimov', 'BrianKim', 'ShuPing', 'EvanSpiegel',
             'MichaelPlatt', 'QiShi', 'ZhangYong', 'JayChaudhry',
             'AnthonyPratt', 'JohannGraf', 'DietmarHopp', 'MichaelOtto',
             'AntoniaAxsonJohnson', 'GeorgeRoberts', 'NathanBlecharczyk',
             'JoeGebbia', 'GianluigiAponte', 'JohnFredriksen', 'YaoLiangsong',
             'GiorgioArmani', 'SarathRatanavadi', 'HenryKravis',
             'ChristyWalton', 'LuisSarmiento', 'CaiKui', 'StanKroenke',
             'NielsLouis-Hansen', 'LesWexner', 'SunilMittal', 'TobiLutke',
             'AlbertoBailleres', 'TitoBeveridge', 'AnthonyBamford&Family',
             'TimSweeney', 'ZhaoYan', 'JornRausing', 'ZhangBangxin',
             'AugustvonFinck', 'AndyBeal', 'GeorgeLucas', 'GermanKhan',
             'WeeChoYaw', 'DeniseCoates', 'AlexanderAbramov', 'QianDongqi',
             'HaroldHamm', 'IskandarMakhmudov', 'JohnMalone', 'HansjoergWyss',
             'RupertMurdoch', 'JamesPattison', 'JudeReyes', 'ChrisReyes',
             'TatyanaBakalchuk', 'GabeNewell', 'AndrewCurrie',
             'JohannRupert&Family', 'SilvioBerlusconi', 'JohnReece', 'ChengXue',
             'WilliLiebherr', 'IsoldeLiebherr', 'JohnAlbertSobrato',
             'MarcBenioff', 'DenisSverdlov', 'LiZhenguo', 'SandraOrtegaMera',
             'HuiWingMau', 'LiuJincheng', 'TheoAlbrechtJr.', 'DennisWashington',
             'StephenRoss', 'LinBin', 'MohammedAlAmoudi', 'RobertSmith',
             'RoccoCommisso', 'BenuBangur', 'GermanLarrea', 'AnthonyvonMandl',
             'ShigenobuNagamori', 'LuZhongfang', 'JerryJones', 'PeiZhenhua',
             'SunHongbin', 'UgurSahin', 'JosephLau', 'XuShihui', 'LiGe',
             'NedJohnsonIV', 'ElizabethJohnson', 'AlexanderOtto', 'RuanXueping',
             'RuanLiping', 'DanielDines', 'CarlBennet', 'IzzyEnglander',
             'MagdalenaMartullo', 'LaurentDassault',
             'Marie-HeleneHabert-Dassault', 'ThierryDassault', 'RalphLauren',
             'RichardKinder', 'KeiHoiPang', 'JuanBeckmannVidal&Family',
             'ShahidKhan', 'YuRenrong', 'MatIshbia', 'RahelBlocher',
             'LudwigMerckle', 'ChenJianhua', 'FrankLowy', 'NickyOppenheimer',
             'DavidThomson', 'TaylorThomson', 'PeterThomson', 'BobRich',
             'LeonidFedun', 'NusliWadia', 'GeoffreyKwok', 'FinnRausing',
             'KirstenRausing', 'GeorgeSoros', 'StevenSpielberg',
             'CharlesCadogan', 'LiuHanyuan', 'LizMohn', 'RondaStryker',
             'YuYong', 'ChaseColeman', 'AndyBechtolsheim', 'HongRa-hee',
             'TammyGustavson', 'LinJianhua', 'MartinViessmann&Family',
             'FrederikPaulsen', 'LaurenceGraff', 'TakahisaTakahara',
             'JohnGrayken', 'GangYe', 'SamuelYin', 'WangLaisheng',
             'SriPrakashLohia', 'AxelOberwelland', 'MohamedAlJaber',
             'GwendolynSontheimMeyer', 'PaulineKeinath', 'TomGores',
             'HiroshiMikitani', 'JianJun', 'TehHongPiow', 'TerryPegula',
             'AlexeyKuzmichev', 'JohnSall', 'AnttiHerlin', 'ChrisHohn',
             'DavidShaw', 'NassefSawiris', 'AlainMerieux', 'NatieKirsh',
             'KennethDart', 'HorstPudwill', 'ShariArison', 'NancyLaurie',
             'WangYusuo', 'TanKimChoo', 'StefWertheimer', 'PankajPatel',
             'KjeldKirkKristiansen', 'RayHunt', 'MargarettaTaylor',
             'JamesCoxChambers', 'KatharineRayner', 'FredrikLundberg',
             'ChuMangYee', 'ErnestGarciaIII', 'BertilHult', 'EricSmidt',
             'VincentBollore', 'JoeLewis', 'JoshHarris', 'JKIrving',
             'RonaldMcAulay', 'Jean-MichelBesnier', 'RandaWilliams',
             'DannineAvara', 'ScottDuncan', 'MilaneFrantz',
             'SofieKirkKristiansen', 'AgneteKirkThinggaard',
             'ThomasKirkKristiansen', 'WangLaichun', 'XavierNiel',
             'LynnSchusterman', 'LaiMeisong', 'TomMorris', 'YasumitsuShigeta',
             'KPSingh', 'RahulBajaj', 'SimonReuben', 'DavidReuben', 'LeafHuaLi',
             'GeorgeKaiser', 'BomKim', 'AndreyGuryev', 'ChungMong-Koo',
             'Jean-PierreCayard', 'PeterThiel', 'JaneLauder', 'UdoTschira',
             'HaraldTschira', 'LvXiang-yang', 'BubbaCathy', 'IvanGlasenberg',
             'DanCathy', 'AndreHoffmann', 'PhilipNg', 'PetrAven', 'MarkShoen',
             'RobertNg', 'TsaiEng-Meng', 'IsaacPerlmutter', 'LindaCampbell',
             'GayeFarncombe', 'MichaelHerz&Family', 'OlavThon', 'BarryLam',
             'RobertRowling', 'BarryDiller', 'WolfgangHerz&Family',
             'LeonardStern', 'WangWenjing', 'ManuelVillar',
             'CharlesButt&Family', 'AnthonyWood',
             'Peter-AlexanderWacker&Family', 'AndreasHalvorsen', 'TerryGou',
             'RobertKraft', 'AnnKroenke', 'HenrySamueli', 'FritsGoldschmeding',
             'ArthurIrving', 'AndreyKozitsyn', 'VeraMichalski-Hoffmann',
             'MajaHoffmann', 'MajidAlFuttaim', 'EdwardRoski', 'ZhangLei',
             'CharlesJohnson', 'RichardBranson', 'MiucciaPrada', 'VivienChen',
             'MarcosGalperin', 'BidzinaIvanishvili', 'GuentherFielmann',
             'PatrizioBertelli', 'PatStryker', 'FrancisChoi',
             'JefferyHildebrand', 'LiPing', 'ChipWilson',
             'MarieBesnierBeauvalot', 'CliveCalder', 'KwonHyuk-Bin',
             'MarkCuban', 'LinoSaputo', 'PrajogoPangestu',
             'CharlesDolan&Family', 'VladimirKim', 'OddReitan'], dtype=object)
```

```
[19]: data.Country.unique() # It returns unique countries in the Country column from␣
        ↪the dataset
```

```
[19]: array(['United States', 'France', 'Spain ', 'India', 'China', 'Mexico',
             'Japan', 'Italy', 'Germany', 'Russia', 'Hong Kong', 'Australia',
             'United Kingdom', 'Ireland', 'Chile', 'Brazil', 'Sweden',
             'Singapore', 'Malaysia', 'Switzerland', 'Austria', 'Netherlands',
             'Saudi Arabia', 'Nigeria', 'Indonesia', 'Thailand', 'Canada',
             'Colombia', 'Korea', 'Israel', 'Monaco', 'Denmark', 'New Zealand',
             'Viet Nam', 'Ukraine', 'Cyprus', 'South Africa', 'Spain', 'Canda',
             'Romania', 'Taiwan', 'Finland', 'Egypt', 'Cayman Islands',
             'Norway', 'Philippines', 'United Arab Emirates', 'Argentina',
             'Georgia', 'Kazakhstan'], dtype=object)
```

```
[20]: data = data.replace('Canda','Canada',regex=True)
      data.Country.unique()
```

```
[20]: array(['United States', 'France', 'Spain ', 'India', 'China', 'Mexico',
             'Japan', 'Italy', 'Germany', 'Russia', 'Hong Kong', 'Australia',
             'United Kingdom', 'Ireland', 'Chile', 'Brazil', 'Sweden',
             'Singapore', 'Malaysia', 'Switzerland', 'Austria', 'Netherlands',
             'Saudi Arabia', 'Nigeria', 'Indonesia', 'Thailand', 'Canada',
             'Colombia', 'Korea', 'Israel', 'Monaco', 'Denmark', 'New Zealand',
             'Viet Nam', 'Ukraine', 'Cyprus', 'South Africa', 'Spain',
             'Romania', 'Taiwan', 'Finland', 'Egypt', 'Cayman Islands',
             'Norway', 'Philippines', 'United Arab Emirates', 'Argentina',
             'Georgia', 'Kazakhstan'], dtype=object)
```

```
[31]: data.Industry.unique() #It returns unique industry names from the industry␣
       ↪column
```

```
[31]: array(['Technology', 'Consumer', 'Diversified', 'Retail', 'Energy',
              'Industrial', 'Food&Beverage', 'Entertainment', 'Commodities',
              'Real-Estate', 'Finance', 'HealthCare', 'Media&Telecom',
              'Services'], dtype=object)
```

```
[21]: data = data.replace(['\$'," "],'',regex=True)
      data["Total Net Worth"]=data["Total Net Worth"].replace("B","",regex=True)
      data["Total Net Worth"]=pd.to_numeric(data["Total Net Worth"],errors="coerce")
```

```
[22]: data.head()
```

```
[22]:    Rank             Name  Total Net Worth $ Last Change $ YTD Change  \
      0   1.0        JeffBezos            188.0        +1.68B       -2.31B
      1   2.0         ElonMusk            170.0        -2.89B        +773M
      2   3.0  BernardArnault            155.0         +892M       +40.9B
      3   4.0         BillGates            144.0        -1.32B       +12.2B
      4   5.0  MarkZuckerberg            114.0         +203M       +10.9B

               Country    Industry
      0  UnitedStates  Technology
      1  UnitedStates  Technology
      2        France    Consumer
      3  UnitedStates  Technology
      4  UnitedStates  Technology
```

```
[23]: def Value_to_float(x):
          if 'K' in x:
              if len(x)>1:
                  return float(x.replace('K','')) * 0.000001
          if 'M' in x:
              if len(x)>1:
                  return float(x.replace('M','')) * 1000
          if 'B' in x:
              if len(x)>1:
                  return float(x.replace('B',''))
      data['$ Last Change']= data['$ Last Change'].apply(Value_to_float)
```

```
[24]: data.head()
```

```
[24]:    Rank             Name  Total Net Worth  $ Last Change $ YTD Change  \
      0   1.0        JeffBezos            188.0           1.68       -2.31B
      1   2.0         ElonMusk            170.0          -2.89        +773M
```

```
2   3.0  BernardArnault            155.0      892000.00      +40.9B
3   4.0       BillGates            144.0          -1.32      +12.2B
4   5.0  MarkZuckerberg            114.0      203000.00      +10.9B

        Country    Industry
0  UnitedStates  Technology
1  UnitedStates  Technology
2        France    Consumer
3  UnitedStates  Technology
4  UnitedStates  Technology
```

[25]:

```
def Value_to_float(x):
    if 'K' in x:
        if len(x)>1:
            return float(x.replace('K','')) * 0.000001
    if 'M' in x:
        if len(x)>1:
            return float(x.replace('M','')) * 1000
    if 'B' in x:
        if len(x)>1:
            return float(x.replace('B',''))
data['$ YTD Change'] = data['$ YTD Change'].apply(Value_to_float)
```

[26]:

```
data.head()
```

[26]:

```
   Rank            Name  Total Net Worth  $ Last Change  $ YTD Change  \
0   1.0       JeffBezos            188.0           1.68         -2.31
1   2.0        ElonMusk            170.0          -2.89     773000.00
2   3.0  BernardArnault            155.0      892000.00         40.90
3   4.0       BillGates            144.0          -1.32         12.20
4   5.0  MarkZuckerberg            114.0      203000.00         10.90

        Country    Industry
0  UnitedStates  Technology
1  UnitedStates  Technology
2        France    Consumer
3  UnitedStates  Technology
4  UnitedStates  Technology
```

[27]:

```
data.dtypes
```

[27]:

```
Rank                   float64
Name                    object
Total Net Worth        float64
$ Last Change          float64
$ YTD Change           float64
Country                 object
```

```
Industry            object
dtype: object
```

```
[28]: display(data[data['Total Net Worth']>=50])
```

```
    Rank                        Name  Total Net Worth  $ Last Change  \
0    1.0                   JeffBezos            188.0           1.68   
1    2.0                    ElonMusk            170.0          -2.89   
2    3.0              BernardArnault            155.0      892000.00   
3    4.0                   BillGates            144.0          -1.32   
4    5.0              MarkZuckerberg            114.0      203000.00   
5    6.0               WarrenBuffett            108.0          -2.32   
6    7.0                   LarryPage            104.0          -1.12   
7    8.0                  SergeyBrin            101.0          -1.06   
8    9.0                LarryEllison             90.6          -2.46   
9   10.0                SteveBallmer             89.1     -342000.00   
10  11.0  FrancoiseBettencourtMeyers             83.9          -1.33   
11  12.0               AmancioOrtega             79.3          -1.07   
12  13.0                MukeshAmbani             74.1      402000.00   
13  14.0                 CharlesKoch             64.3     -195000.00   
14  15.0     JuliaFlesherKoch&Family             64.3     -195000.00   
15  16.0               ZhongShanshan             63.8     -289000.00   
16  17.0                 GautamAdani             62.8      210000.00   
17  18.0                   JimWalton             62.0     -508000.00   
18  19.0                   RobWalton             61.5     -496000.00   
19  20.0                 AliceWalton             60.1     -489000.00   
20  21.0                   MaHuateng             58.4     -985000.00   
21  22.0              MacKenzieScott             57.0      582000.00   
22  23.0                  CarlosSlim             56.5     -348000.00   
23  24.0             FrancoisPinault             53.7     -697000.00   
24  25.0           PhilKnight&Family             53.3      123000.00   
25  26.0                 MichaelDell             50.4     -849000.00   

    $ YTD Change       Country     Industry
0          -2.31  UnitedStates   Technology
1      773000.00  UnitedStates   Technology
2          40.90        France     Consumer
3          12.20  UnitedStates   Technology
4          10.90  UnitedStates   Technology
5          20.60  UnitedStates  Diversified
6          21.60  UnitedStates   Technology
7          20.80  UnitedStates   Technology
8          10.90  UnitedStates   Technology
9           8.71  UnitedStates   Technology
10          8.11        France     Consumer
11         12.80         Spain       Retail
12         -2.61         India       Energy
13          7.42  UnitedStates   Industrial
```

```
14          7.42  UnitedStates   Industrial
15        -14.40         China  Diversified
16         29.00         India   Industrial
17    -479000.00  UnitedStates       Retail
18         -1.11  UnitedStates       Retail
19         -2.25  UnitedStates       Retail
20          1.94         China   Technology
21         -1.49  UnitedStates   Technology
22     158000.00        Mexico  Diversified
23          5.93        France     Consumer
24    -622000.00  UnitedStates     Consumer
25         10.20  UnitedStates   Technology
```

```
[42]: display(data[data.Country=='India'])
```

```
      Rank               Name  Total Net Worth  $ Last Change  $ YTD Change  \
12    13.0       MukeshAmbani            74.10       402000.0         -2.61
16    17.0        GautamAdani            62.80       210000.0         29.00
44    45.0         AzimPremji            31.40      -347000.0          6.01
74    75.0          ShivNadar            23.20      -102000.0    -904000.00
86    87.0      LakshmiMittal            20.90      -252000.0          4.48
121  122.0    CyrusPoonawalla            16.20       -45000.0     -25500.00
132  133.0  RadhakishanDamani            15.40         8990.0     481000.00
139  140.0          UdayKotak            14.60      -359000.0         -1.75
182  183.0      DilipShanghvi            12.10       207000.0          1.89
184  185.0      SavitriJindal            11.90      -266000.0          4.59
223  224.0         KumarBirla            10.40       -62600.0          3.55
257  258.0        SunilMittal             9.59       -57800.0     696000.00
305  306.0         BenuBangur             8.61        81000.0          1.05
346  347.0         NusliWadia             7.76        57700.0    -128000.00
395  396.0        PankajPatel             6.86        75500.0          1.58
425  427.0            KPSingh             6.54        -6280.0     874000.00
426  428.0         RahulBajaj             6.53       -21800.0     966000.00

    Country       Industry
12    India         Energy
16    India     Industrial
44    India     Technology
74    India     Technology
86    India         Retail
121   India     HealthCare
132   India         Retail
139   India        Finance
182   India     HealthCare
184   India    Commodities
223   India     Industrial
257   India  Media&Telecom
305   India    Commodities
```

```
346    India     Diversified
395    India      HealthCare
425    India     Real-Estate
426    India     Diversified
```

1.1.3 Data Visualization Section:

[43]:

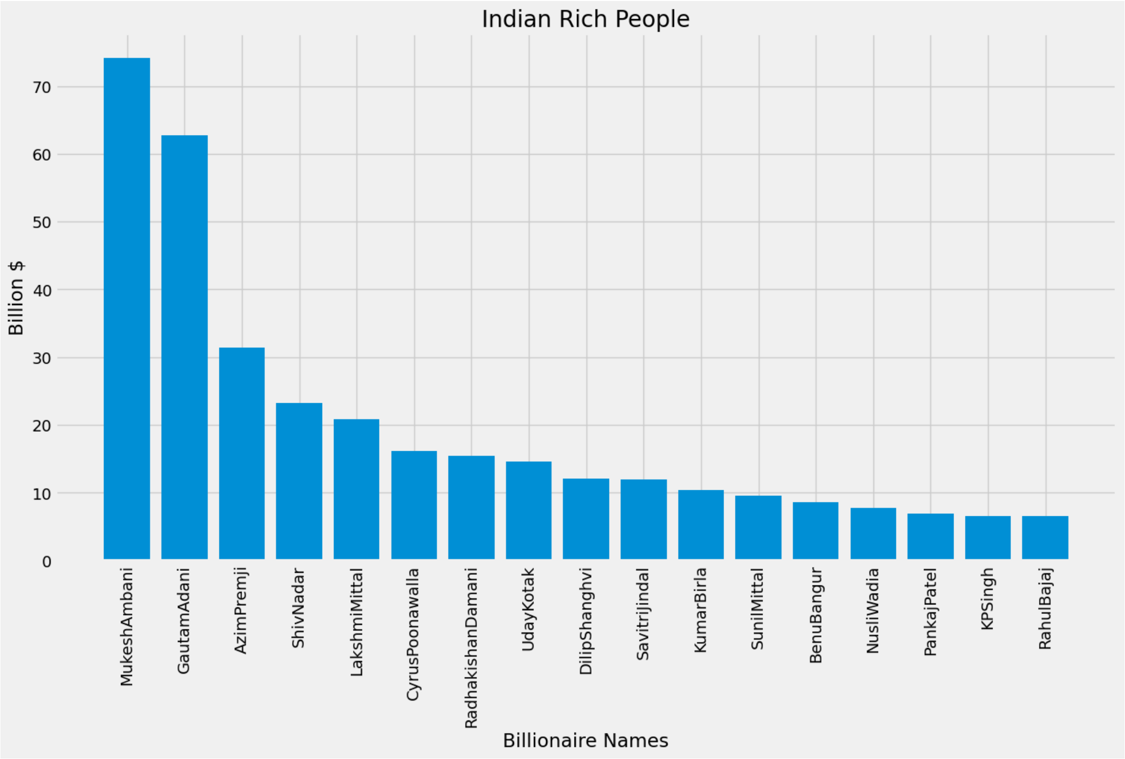
```
# Import visualization Libraries:
import matplotlib.pyplot as plt
from matplotlib import style
from matplotlib import figure
style.use('fivethirtyeight')
```

[44]:

```
ind = data[data.Country== 'India']
```

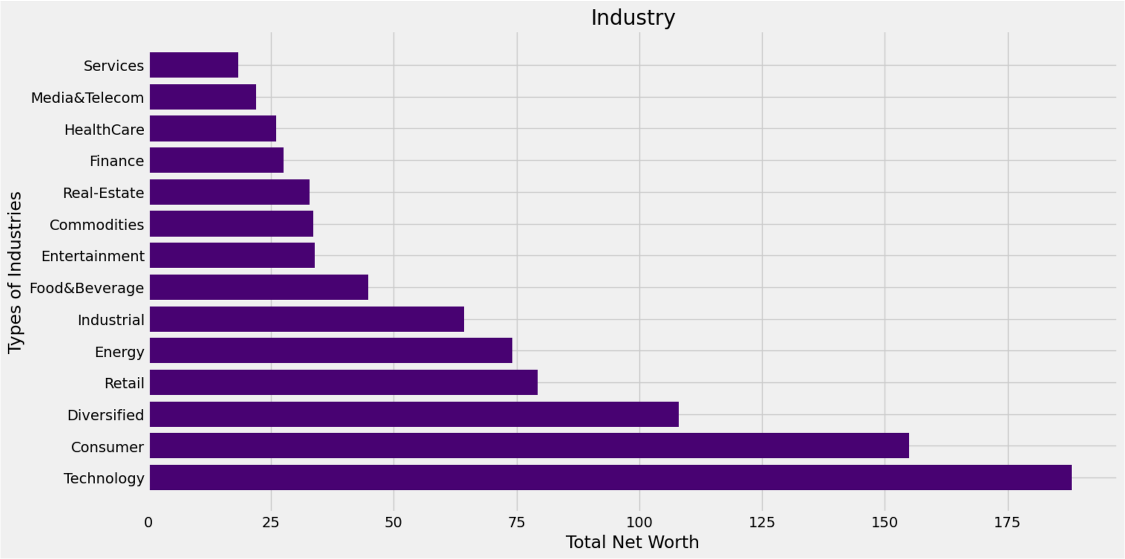
[49]:

```
plt.bar(ind['Name'],ind['Total Net Worth'])
plt.title("Indian Rich People")
plt.xlabel('Billionaire Names')
plt.ylabel("Billion $")
plt.gcf().set_size_inches(15, 8)
plt.xticks(rotation=90)
plt.show()
```



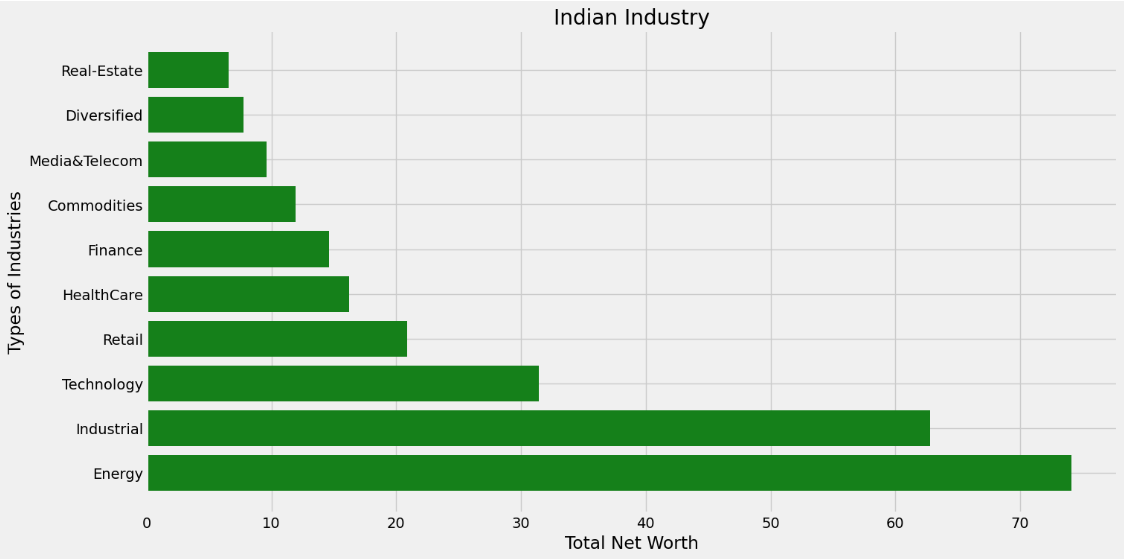
[53]:

```
#OF All Countries
plt.barh(data['Industry'],data['Total Net Worth'],color='#480272')
plt.title("Industry")
plt.xlabel("Total Net Worth")
plt.ylabel("Types of Industries")
plt.gcf().set_size_inches(15, 8)
plt.show()
```



[57]:

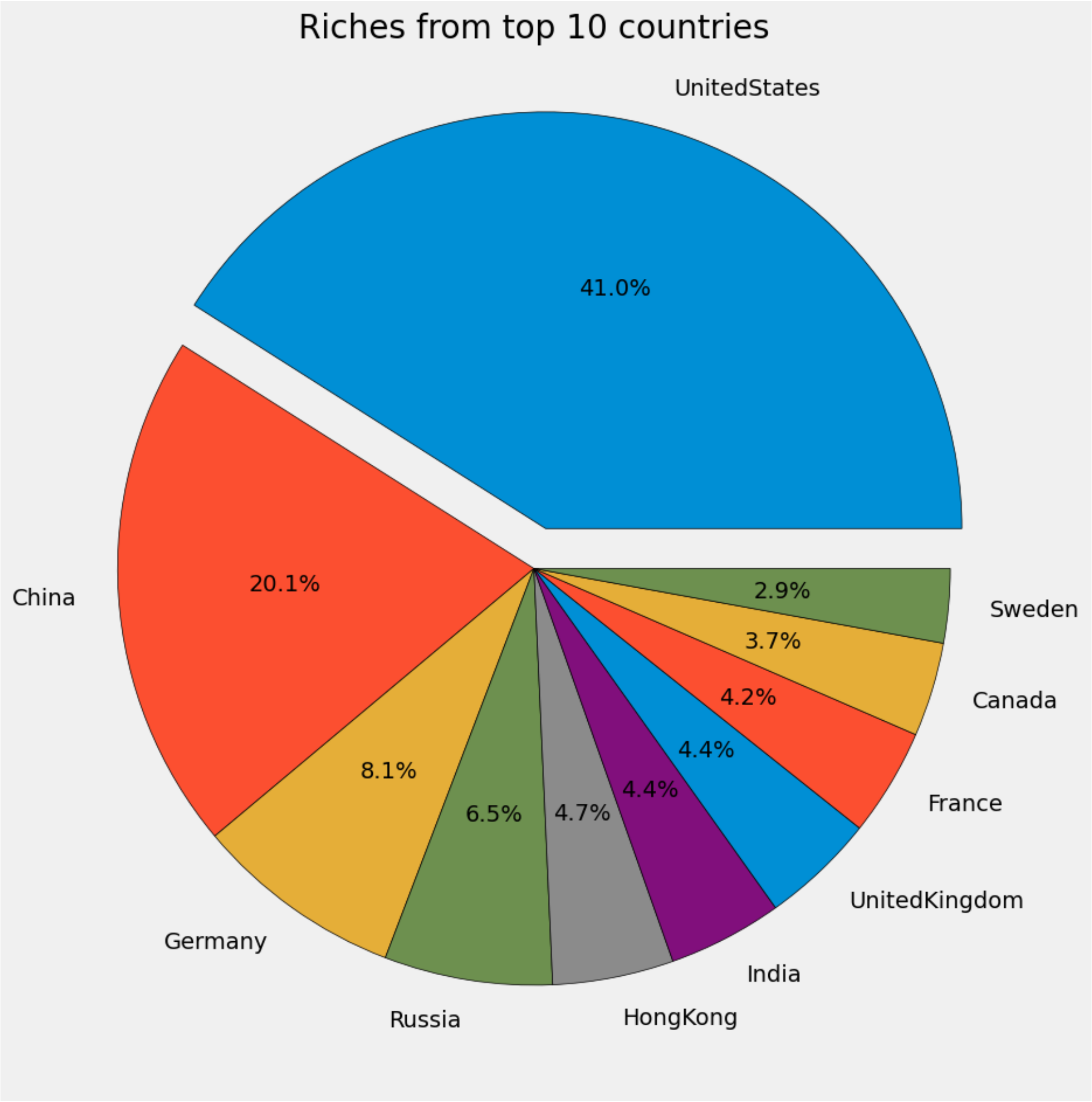
```
#India only
plt.barh(ind['Industry'],ind['Total Net Worth'],color='#15801A')
plt.title("Indian Industry")
plt.xlabel("Total Net Worth")
plt.ylabel("Types of Industries")
plt.gcf().set_size_inches(15, 8)
plt.show()
```



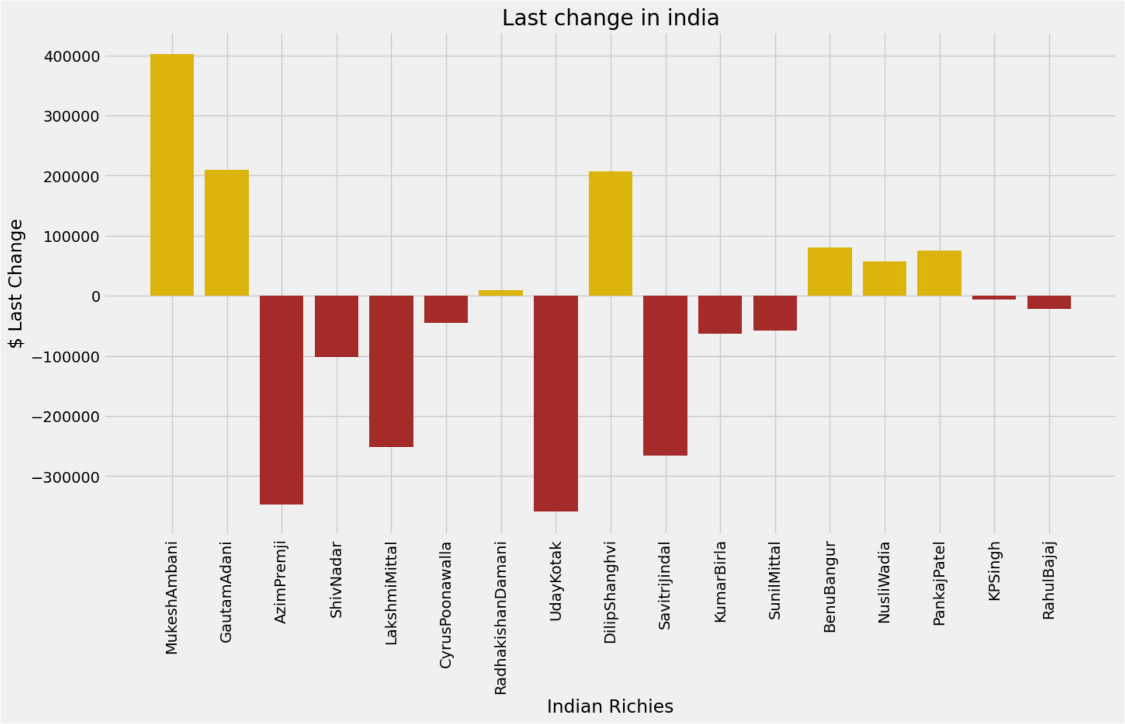
[56]:
```
display(data['Country'].value_counts().head(10))
```

```
Country
UnitedStates     157
China             77
Germany           31
Russia            25
HongKong          18
India             17
UnitedKingdom     17
France            16
Canada            14
Sweden            11
Name: count, dtype: int64
```

[63]:
```
#Percentage of riches from top 10 countries
country=data['Country'].value_counts().head(10).values
name=data['Country'].value_counts().head(10).index
plt.gcf().set_size_inches(20, 11)
plt.pie(country,labels=name,autopct="%1.1f%%",wedgeprops={'edgecolor':
  ↪'black'},explode=[0.1,0,0,0,0,0,0,0,0,0])
plt.title("Riches from top 10 countries")
plt.show()
```



```
[69]: #Last change in india
      plt.bar(ind['Name'],ind['$ Last Change'],color=(ind['$ Last Change']>0.0).
       ↪map({True:'#DBB40C',False:'#A52A2A'}))
      plt.title("Last change in india")
      plt.xlabel("Indian Richies")
      plt.ylabel("$ Last Change")
      plt.gcf().set_size_inches(15, 8)
      plt.xticks(rotation=90)
      plt.show()
```



2 Thank You! Keep Learning !!