```
# Importing major Libraries

# Analysis by rahul badola-
#contact- contact.rahulbadola@gmail.com
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
import plotly.express as px
import warnings
warnings.filterwarnings('ignore')
```

Basic Composition of Data

```
In [2]: #loading data into 'df' variable
         df=pd.read_csv('LS_2.0.xls')
In [3]: # First 5 rows
         df.head()
              STATE CONSTITUENCY
                                       NAME WINNER PARTY SYMBOL GENDER CRIMINAL\nCASES AGE CATEGORY EDUCATION
                                                                                                                                 ASS
                                      SOYAM
         0 Telangana
                           ADILABAD
                                       BAPU
                                                         BJP
                                                                 Lotus
                                                                         MALE
                                                                                             52 52.0
                                                                                                              ST
                                                                                                                    12th Pass
                                                                                                                               30.99.4
                                        RAO
                                                                                                                               ~ 30 L
                                      Godam
                                                                                                                        Post
                           ADILABAD
                                                                                                                             1,84,77,8
                                                        TRS
         1 Telangana
                                                                  Car
                                                                         MALE
                                                                                              0 54 0
                                                                                                             ST
                                      Nagesh
                                                                                                                     Graduate
                                                                                                                               ~ 1 Cr
                           ADILABAD
         2 Telangana
                                                    0
                                                         INC
                                                                 Hand
                                                                         MALE
                                                                                              3 52.0
                                                                                                             ST
                                                                                                                    12th Pass 3,64,91,0
                                     RAMESH
                                                                                                                               ~ 3 Cr
         3 Telangana
                           ADILABAD
                                       NOTA
                                                       NOTA
                                                                  NaN
                                                                          NaN
                                                                                            NaN NaN
                                                                                                                        NaN
                                                                                                             NaN
                                     Satyapal
                Uttar
                                        Śingh
                              AGRA
                                                                                              5 58.0
                                                                 Lotus
                                                                         MALE
                                                                                                                    Doctorate 7,42,74,0
             Pradesh
                                       Baghel
In [4]: # Exploring the column names
         df.columns
         Out[4]:
                 'OVER TOTAL ELECTORS \nIN CONSTITUENCY'
                 'OVER TOTAL VOTES POLLED \nIN CONSTITUENCY', 'TOTAL ELECTORS'],
               dtype='object')
In [5]: df.dtypes
         STATE
                                                            object
         CONSTITUENCY
                                                            object
         NAME
                                                            object
         WINNER
                                                             int64
         PARTY
                                                            object
         SYMB0L
                                                            object
         GENDER
                                                            object
         CRIMINAL\nCASES
                                                            object
         AGE
                                                           float64
         CATEGORY
                                                            object
         EDUCATION
                                                            object
         ASSETS
                                                            object
         LIABILITIES
                                                            object
         GENERAL\nV0TES
                                                             int64
         POSTAL\nV0TES
                                                             int64
         TOTAL\nV0TES
                                                             int64
         OVER TOTAL ELECTORS \nIN CONSTITUENCY
                                                           float64
         OVER TOTAL VOTES POLLED \nIN CONSTITUENCY
                                                           float64
         TOTAL ELECTORS
         dtype: object
In [6]: # Exploring the unique values in Criminal cases Column
         df['CRIMINAL\nCASES'].unique()
Out[6]: array(['52', '0', '3', nan, '5', '1', '6', '2', '4', '9', '7', '40', '8', '24', '14', '28', 'Not Available', '12', '11', '13', '15', '204', '10', '22', '31', '42', '16', '240', '41', '18'], dtype=object)
```

```
In [7]: # Replacing 'Not Available' with 0
         df['CRIMINAL\nCASES']=np.where(df['CRIMINAL\nCASES']=='Not Available',0,df['CRIMINAL\nCASES'])
 In [8]: # Shape- Rows & Column
         df.shape
Out[8]: (2263, 19)
In [9]: # Checking Information
         df.info()
         <class 'pandas.core.frame.DataFrame'>
         RangeIndex: 2263 entries, 0 to 2262
         Data columns (total 19 columns):
          # Column
                                                       Non-Null Count Dtype
          0
             STATE
                                                                      object
                                                       2263 non-null
             CONSTITUENCY
          1
                                                       2263 non-null
                                                                       object
                                                       2263 non-null
             NAME
                                                                      object
          3
             WINNER
                                                       2263 non-null
                                                                       int64
          4
             PARTY
                                                       2263 non-null
                                                                       object
          5
              SYMB0L
                                                       2018 non-null object
          6
             GENDER
                                                       2018 non-null object
          7
              CRIMINAL
         CASES
                                         2018 non-null
                                                        object
          8
                                                       2018 non-null
              AGE
                                                                       float64
                                                                       object
          9
              CATEGORY
                                                       2018 non-null
          10 EDUCATION
                                                       2018 non-null
                                                                       object
          11 ASSETS
                                                       2018 non-null
                                                                       object
          12 LIABILITIES
                                                       2018 non-null
                                                                       object
          13 GENERAL
         VOTES
                                          2263 non-null int64
          14 POSTAL
         V0TES
                                           2263 non-null int64
          15 TOTAL
         VOTES
                                            2263 non-null int64
          16 OVER TOTAL ELECTORS
         IN CONSTITUENCY
                             2263 non-null float64
          17 OVER TOTAL VOTES POLLED
         IN CONSTITUENCY 2263 non-null
                                        float64
          18 TOTAL ELECTORS
                                                       2263 non-null
                                                                     int64
         dtypes: float64(3), int64(5), object(11)
         memory usage: 336.0+ KB
In [28]: # Using Describe to check the discription and detailed info
         df.describe()
Out[28]:
                                                                                                             OVER TOTAL
                                                                                                OVER TOTAL
                                                                                                           VOTES POLLED
                 WINNED CRIMINAL INCASES
                                              AGE GENERAL INVOTES POSTAL INVOTES TOTAL INVOTES ELECTORS ININ
```

\nIN CONSTITUENCY	CONSTITUENCY	TOTALINVOTES	POSTALINVOTES	GENERALINVOTES	AGE	CRIMINALINGASES	WINNER	
2018.000000	2018.000000	2.018000e+03	2018.000000	2.018000e+03	2018.000000	2018.000000	2018.000000	count
25.808492	17.596810	2.922954e+05	1105.111001	2.911903e+05	52.273538	1.453915	0.267096	mean
21.403985	14.886247	2.555874e+05	1661.283371	2.545964e+05	11.869373	7.636973	0.442553	std
1.000039	0.097941	1.342000e+03	0.000000	1.339000e+03	25.000000	0.000000	0.000000	min
2.870669	1.953617	3.074375e+04	97.000000	3.047625e+04	43.250000	0.000000	0.000000	25%
27.749894	18.036861	2.855250e+05	463.000000	2.846300e+05	52.000000	0.000000	0.000000	50%
44.349684	30.708115	5.076175e+05	1545.500000	5.058620e+05	61.000000	1.000000	1.000000	75%
74.411856	51.951012	1.068569e+06	19367.000000	1.066824e+06	86.000000	240.000000	1.000000	max

In [10]: # Checking Null Values

df.isnull().sum()

```
CONSTITUENCY
         NAME
                                                           0
         WINNER
                                                           0
                                                           0
         PARTY
         SYMB0L
                                                         245
         GENDER
                                                         245
         CRIMINAL\nCASES
                                                         245
         AGE
                                                         245
         CATEGORY
                                                         245
         EDUCATION
                                                         245
                                                         245
         ASSETS
         LIABILITIES
                                                         245
         GENERAL\nV0TES
                                                           0
         POSTAL\nV0TES
                                                           0
                                                           0
         TOTAL\nV0TES
         OVER TOTAL ELECTORS \nIN CONSTITUENCY
                                                           0
         OVER TOTAL VOTES POLLED \nIN CONSTITUENCY
                                                           0
                                                           0
         TOTAL ELECTORS
         dtype: int64
In [11]: # Exploring Columns containing Null values
         df[df.SYMBOL.isna()==True]
Out[11]:
                  STATE
                          CONSTITUENCY NAME WINNER PARTY SYMBOL GENDER CRIMINAL\nCASES AGE CATEGORY EDUCATION ASSE
            3
                Telangana
                               ADILABAD NOTA
                                                     0
                                                        NOTA
                                                                  NaN
                                                                          NaN
                                                                                           NaN NaN
                                                                                                           NaN
                                                                                                                      NaN
                             AHMEDABAD
                                         NOTA
           14
                  Guiarat
                                                     0
                                                        NOTA
                                                                  NaN
                                                                          NaN
                                                                                                           NaN
                                                                                                                      NaN
                                                                                           NaN NaN
                                  WEST
                    West
                            ALIPURDUARS NOTA
                                                        NOTA
           39
                                                     0
                                                                  NaN
                                                                          NaN
                                                                                           NaN NaN
                                                                                                           NaN
                                                                                                                      NaN
                   Bengal
           46 Uttarakhand
                                ALMORA NOTA
                                                     0
                                                        NOTA
                                                                  NaN
                                                                          NaN
                                                                                           NaN NaN
                                                                                                           NaN
                                                                                                                      NaN
                  Andhra
           54
                            AMALAPURAM NOTA
                                                        NOTA
                                                                  NaN
                                                                                                                      NaN
                                                     0
                                                                          NaN
                                                                                           NaN NaN
                                                                                                           NaN
                  Pradesh
         2225
               Tamil Nadu
                          VIRUDHUNAGAR NOTA
                                                     0
                                                        NOTA
                                                                  NaN
                                                                          NaN
                                                                                           NaN NaN
                                                                                                           NaN
                                                                                                                      NaN
                  Andhra
         2230
                         VISAKHAPATNAM NOTA
                                                        NOTA
                                                                  NaN
                                                                                                                      NaN
                                                                          NaN
                                                                                           NaN NaN
                                                                                                           NaN
                 Pradesh
                  Andhra
         2235
                           VIZIANAGARAM NOTA
                                                     0
                                                        NOTA
                                                                  NaN
                                                                          NaN
                                                                                           NaN NaN
                                                                                                           NaN
                                                                                                                      NaN
                 Pradesh
         2241
                Telangana
                              WARANGAL NOTA
                                                        NOTA
                                                                  NaN
                                                                          NaN
                                                                                           NaN
                                                                                                NaN
                                                                                                           NaN
                                                                                                                      NaN
         2262
                Telangana
                             ZAHIRABAD NOTA
                                                        NOTA
                                                                  NaN
                                                                          NaN
                                                                                           NaN NaN
                                                                                                           NaN
                                                                                                                      NaN
         245 rows × 19 columns
In [12]: # Dropping Columns containing Null values
         df=df.dropna()
In [13]: # Rechecking Null Values
         df.isnull().sum()
         STATE
                                                         0
Out[13]:
         CONSTITUENCY
                                                         0
         NAME
                                                         0
         WINNER
                                                         0
         PARTY
                                                         0
         SYMB0L
                                                         0
         GENDER
                                                         0
         CRIMINAL\nCASES
                                                         0
         AGE
                                                         0
         CATEGORY
                                                         0
         EDUCATION
                                                         0
         ASSETS
                                                         0
         LIABILITIES
                                                         0
         GENERAL\nV0TES
                                                         0
         POSTAL\nV0TES
                                                         0
         TOTAL\nV0TES
                                                         0
         OVER TOTAL ELECTORS \nIN CONSTITUENCY
                                                         0
         OVER TOTAL VOTES POLLED \nIN CONSTITUENCY
                                                         0
         TOTAL ELECTORS
                                                         0
         dtype: int64
In [14]: # Reseting Index of Data frame
         df.reset_index(drop=True,inplace=True)
```

0

0

STATE

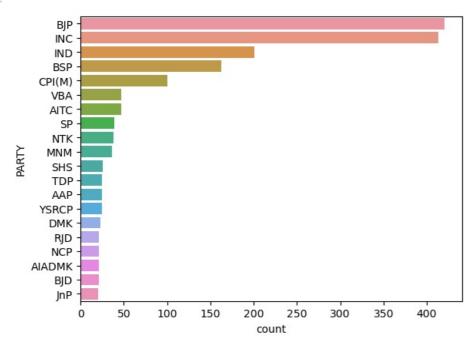
Out[10]:

EDA- Exploratory Data Analysis

Basic Analysis

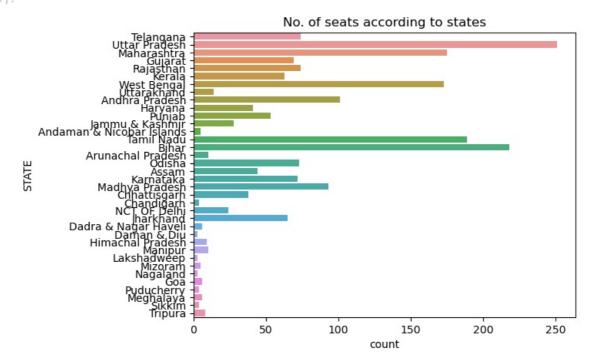
```
In [15]: # Cadidates in Each Party
sns.barplot(x=df.PARTY.value_counts().head(20),y=df.PARTY.value_counts().head(20).index)
```

Out[15]: <Axes: xlabel='count', ylabel='PARTY'>



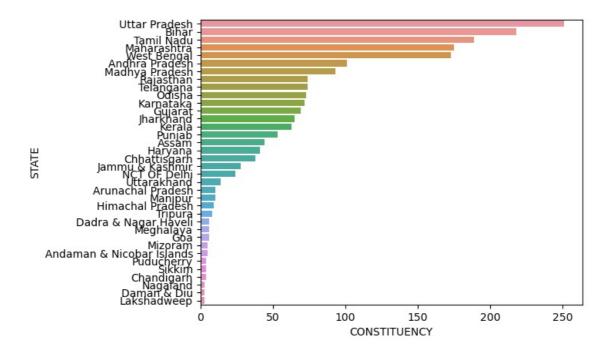
```
# No. of seats according to states
sns.countplot(y=df.STATE)
plt.title('No. of seats according to states')
```

Text(0.5, 1.0, 'No. of seats according to states')



```
# No. of Constituency in each state
cons=df.groupby('STATE')['CONSTITUENCY'].count().sort_values(ascending=False)
sns.barplot(x=cons,y=cons.index)
```

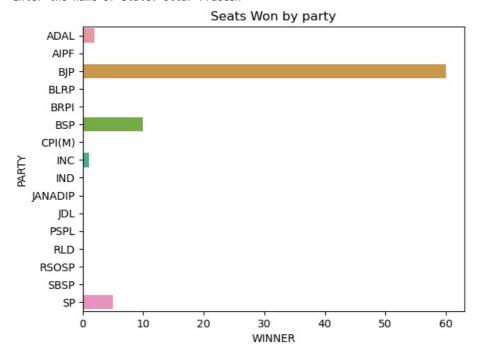
Axes: xlabel='CONSTITUENCY', ylabel='STATE'>



Seats & Winner Analysis

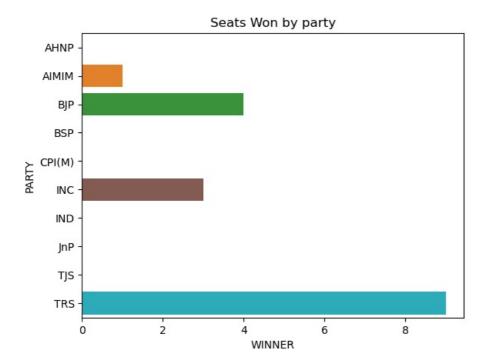
```
In [879... # Winner in each states(Enter the name of state)
    def winner_in_state():
        inp=input('Enter the name of State: ')
        state=df[df.STATE==inp]
        grp=state.groupby(['STATE','PARTY'])['WINNER'].sum()
        sns.barplot(x=grp,y=grp.index.get_level_values('PARTY'))
        plt.title('Seats Won by party')
In [76]: winner_in_state()
```

Enter the name of State: Uttar Pradesh



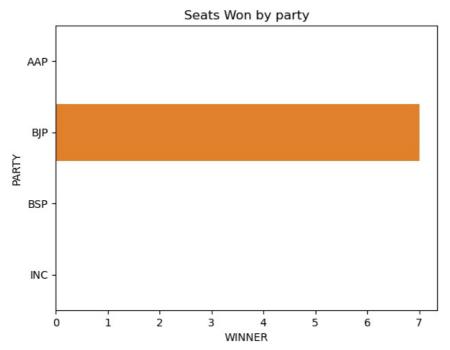
```
In [44]: winner_in_state()
```

Enter the name of State: Telangana



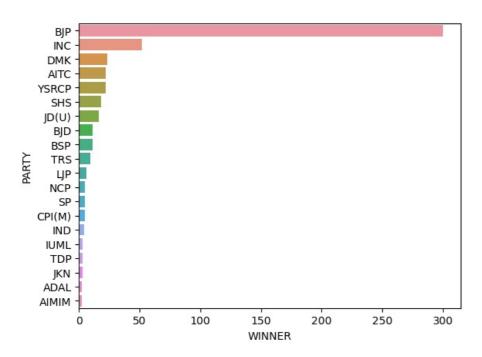
In [45]: winner_in_state()

Enter the name of State: NCT OF Delhi



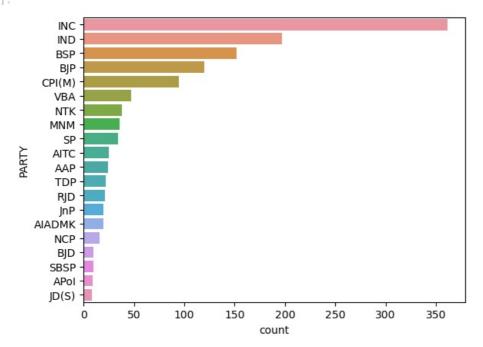
```
In [355... # No. of seats won by Parties
won=df[df.WINNER==1]
seats_won=won.groupby('PARTY')['WINNER'].sum().sort_values(ascending=False).head(20)
sns.barplot(x=seats_won,y=seats_won.index)
```

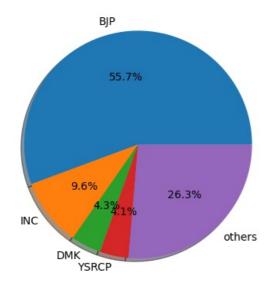
Out[355]: <Axes: xlabel='WINNER', ylabel='PARTY'>



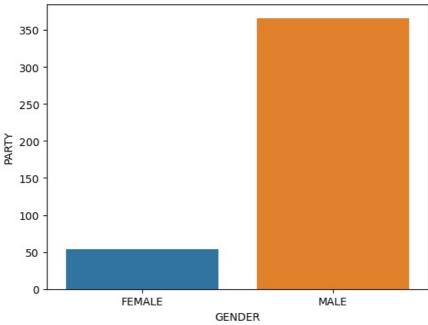
```
In [356... # Seats Lose by party
lose=df[df.WINNER==0]
sns.barplot(x=lose.PARTY.value_counts().head(20),y=lose.PARTY.value_counts().head(20).index)
```

Out[356]: <Axes: xlabel='count', ylabel='PARTY'>



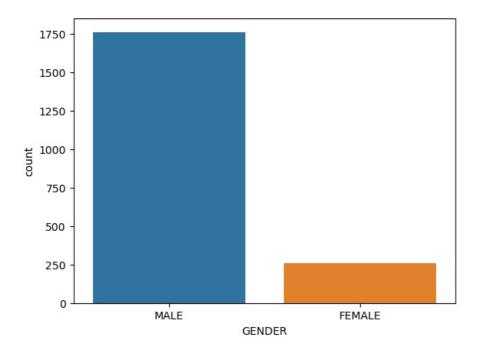


Gender Analysis



```
In [360... # Distribution of Male & Female
sns.countplot(x=df.GENDER)
```

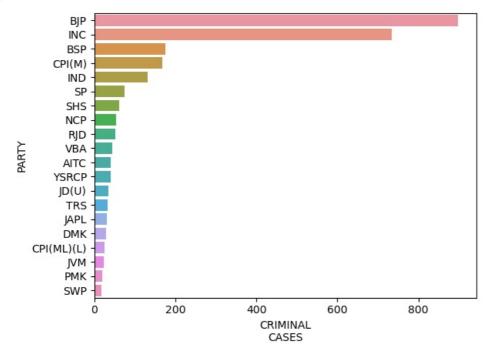
Out[360]: <Axes: xlabel='GENDER', ylabel='count'>



Criminal Cases Analysis

```
In [361_ # Highest to Lowest Criminal Cases on Party's canditates
         df['CRIMINAL\nCASES']=df['CRIMINAL\nCASES'].astype(int)
         b=df.groupby('PARTY')['CRIMINAL\nCASES'].sum().sort_values(ascending=False).head(20)
         sns.barplot(x=b,y=b.index)
          <Axes: xlabel='CRIMINAL\nCASES', ylabel='PARTY'>
```

Out[361]:

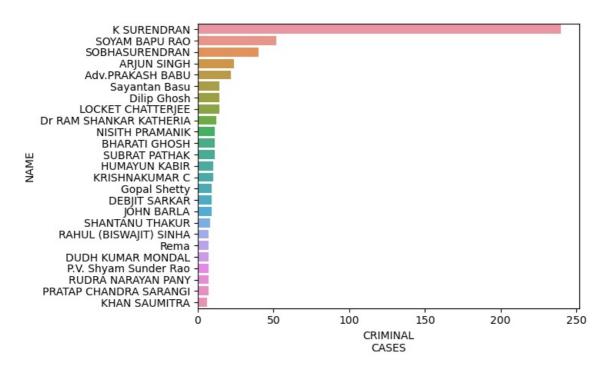


```
In [392... # Detailed view of Criminal cases on parties with respect to seats won.
       b = \texttt{df.groupby('PARTY')['CRIMINAL \nCASES'].sum().sort\_values(ascending=\textbf{False})}
       win_party=won.PARTY.value_counts()
       perc_seats_won=(win_party/win_party.sum())*100
        cases=(b/b.sum())*100
       data.rename(columns={'key 0':'PARTY'},inplace=True)
        cases_data=pd.DataFrame({'no. of criminal cases':b,'% criminal cases':cases.round(2)}).reset_index()
        real_data=pd.merge(data,cases_data,on='PARTY')
        real data
```

Out[392]:		PARTY	seats_won	Percentage_seats_won	no. of criminal cases	% criminal cases
	0	BJP	300	55.66	898	30.61
	1	INC	52	9.65	734	25.02
	2	DMK	23	4.27	28	0.95
	3	YSRCP	22	4.08	41	1.40
	4	AITC	22	4.08	41	1.40
	5	SHS	18	3.34	62	2.11
	6	JD(U)	16	2.97	35	1.19
	7	BJD	11	2.04	1	0.03
	8	BSP	11	2.04	175	5.96
	9	TRS	9	1.67	32	1.09
	10	LJP	6	1.11	12	0.41
	11	SP	5	0.93	74	2.52
	12	NCP	5	0.93	54	1.84
	13	CPI(M)	5	0.93	168	5.73
	14	IND	4	0.74	131	4.46
	15	JKN	3	0.56	1	0.03
	16	TDP	3	0.56	7	0.24
	17	IUML	3	0.56	3	0.10
	18	ADAL	2	0.37	2	0.07
	19	SAD	2	0.37	10	0.34
	20	AIMIM	2	0.37	13	0.44
	21	SKM	1	0.19	0	0.00
	22	AIADMK	1	0.19	12	0.41
	23	AAP	1	0.19	7	0.24
	24	JMM	1	0.19	4	0.14
	25	NPF	1	0.19	0	0.00
	26	NDPP	1	0.19	0	0.00
	27	RLTP	1	0.19	0	0.00
	28	AIUDF	1	0.19	9	0.31
	29	MNF	1	0.19	0	0.00
	30	KEC(M)	1	0.19	0	0.00
	31	RSP	1	0.19	5	0.17
	32	JD(S)	1	0.19	3	0.10
	33	AJSUP	1	0.19	2	0.07
	34	VCK	1	0.19	3	0.10
	35	NPEP	1	0.19	1	0.03

```
In [29]: # Highest to Lowest criminal cases on a Particular party candidate(Enter the name of Party in order to see cand
    df['CRIMINAL\nCASES']=df['CRIMINAL\nCASES'].astype(int)
    def criminal_cases():
        name=input('Enter the name of Party: ')
        new_df=df[df.PARTY==name]
        no_cases=new_df.groupby('NAME')['CRIMINAL\nCASES'].sum().sort_values(ascending=False).head(25)
        sns.barplot(x=no_cases,y=no_cases.index)
In [25]: criminal_cases()
```

Enter the name of Party: BJP





Enter the name of Party: INC

Adv. DEAN KURIAKOSE ANUMULA REVANTH REDDY George Tirkey Komati Reddy Venkat Reddy Sanjay Nirupam Rahul Gandhi ELANGOVAN, E.V.K.S. PRADEEP KUMAR MAJHI KARTI P CHIDAMBARAM NEPAL MAHATA DHIRENDRA PRATAP SINGH DIGVIJAYA SINGH RAKESH SACHAN BALKUMAR PATEL AJAY RAI IMRAN MASOOD HIBI EDEN V K SREEKANDAN SAVITRI BAI PHULE T. N. PRATHAPAN ADHIR RANJAN CHOWDHURY Adv. ADOOR PRAKASH RAJKUMARI RATNA SINGH BHUPINDER SINGH HOODA

50

75

100

CRIMINAL CASES

125

150

175

200

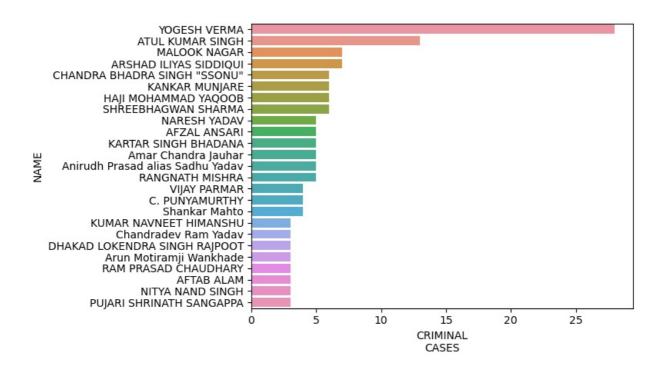
25

0

In [27]: criminal_cases()

Enter the name of Party: BSP

Mohan Joshi



Age Analysis

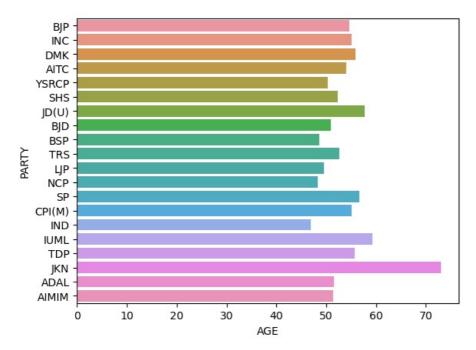
```
# Average Age of Canditates in Each Party

age=df.groupby('PARTY')['AGE'].mean().reset_index()
age_sort=won.groupby('PARTY')['WINNER'].sum().sort_values(ascending=False).reset_index()
avg_age=pd.merge(age_sort,age,on='PARTY').head(20)

sns.barplot(x=avg_age.AGE,y=avg_age.PARTY)
avg_age
```

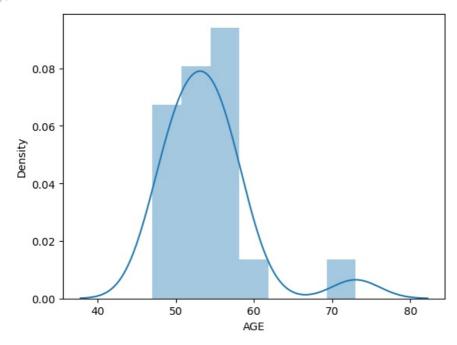
Out[393]

	PARTY	WINNER	AGE
0	BJP	300	54.583333
1	INC	52	55.031477
2	DMK	23	55.826087
3	AITC	22	54.042553
4	YSRCP	22	50.320000
5	SHS	18	52.346154
6	JD(U)	16	57.777778
7	BJD	11	50.904762
8	BSP	11	48.588957
9	TRS	9	52.647059
10	LJP	6	49.500000
11	NCP	5	48.285714
12	SP	5	56.666667
13	CPI(M)	5	55.120000
14	IND	4	46.985075
15	IUML	3	59.333333
16	TDP	3	55.800000
17	JKN	3	73.000000
18	ADAL	2	51.500000
19	AIMIM	2	51.333333
18		2	51.500000
19	AIMIM	2	51.333333



In [394... # Distribution of Age
sns.distplot(avg_age.AGE)

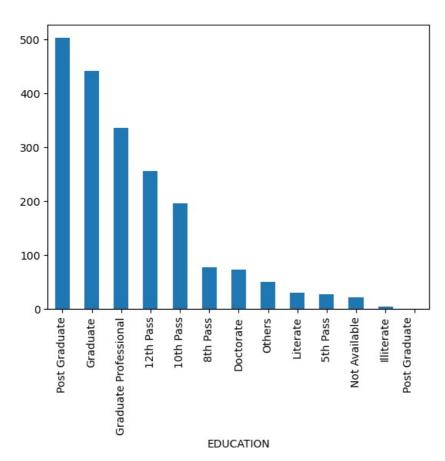
<Axes: xlabel='AGE', ylabel='Density'>



Education Analysis

```
In [395... # Aggregate Education qualification
         df.EDUCATION.value_counts().plot(kind='bar')
         <Axes: xlabel='EDUCATION'>
```

Out[395]:

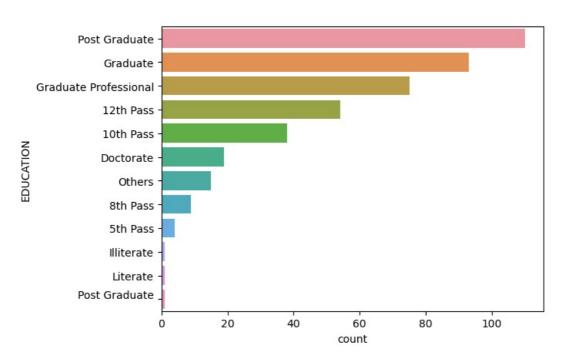


```
In [396.. # Distribution of Education qualification in a particular Party(Enter the name of the party)

def education():
    name=input('Enter the Party Name: ')
    party_sort=df[df.PARTY==name]
    sns.barplot(x=party_sort.EDUCATION.value_counts(), y=party_sort.EDUCATION.value_counts().index)
    print(party_sort.EDUCATION.value_counts())
```

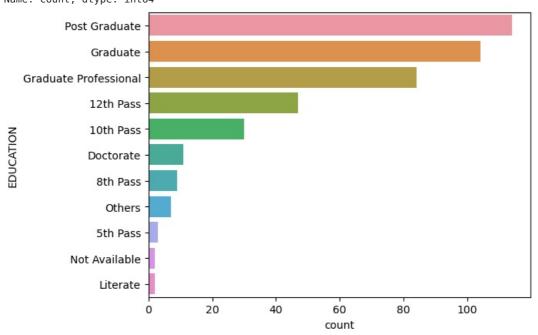
In [397... education()

```
Enter the Party Name: BJP
EDUCATION
Post Graduate
                           110
                            93
75
{\tt Graduate}
Graduate Professional
                            54
12th Pass
10th Pass
                            38
                            19
Doctorate
                            15
0 thers
8th Pass
                             9
5th Pass
                             4
                             1
Illiterate
Literate
Post Graduate\n
Name: count, dtype: int64
```



In [398... education()

Enter the Party Name: INC EDUCATION Post Graduate 114 Graduate 104 Graduate Professional 84 12th Pass 47 10th Pass Doctorate 8th Pass Others 5th Pass Not Available Literate Name: count, dtype: int64



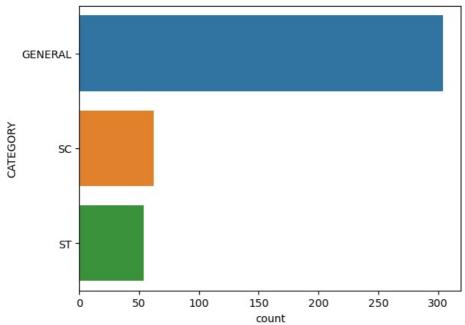
Category(cast) Analysis

```
In [400... def category():
    name=input('Enter the Party Name: ')
    cat_sort=df[df.PARTY==name]
    sns.barplot(x=cat_sort.CATEGORY.value_counts(),y=cat_sort.CATEGORY.value_counts().index)
    print(cat_sort.CATEGORY.value_counts())
```

In [401... category()

Enter the Party Name: BJP CATEGORY GENERAL 304 SC 62 ST 54

Name: count, dtype: int64

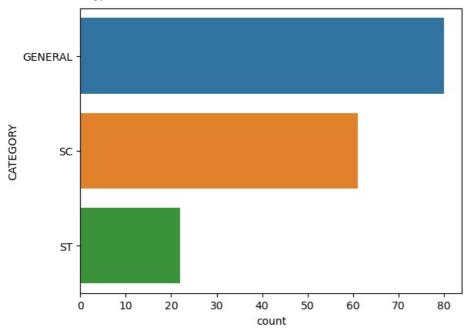


In [402... category()

Enter the Party Name: BSP CATEGORY

CATEGORY
GENERAL 80
SC 61
ST 22

Name: count, dtype: int64

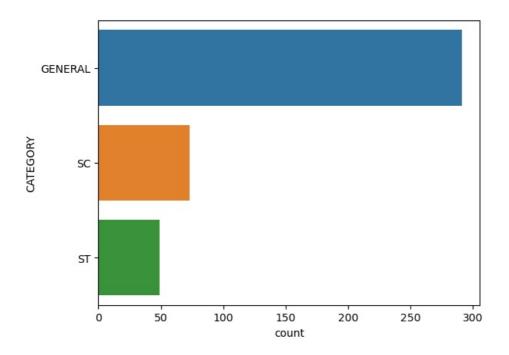


In [195... category()

Enter the Party Name: INC

CATEGORY
GENERAL 291
SC 73
ST 49

Name: count, dtype: int64



Assets Analysis

AIADMK JNJP

0

```
In [ ]: # Assets of Party's candidate
In [880... df.ASSETS.reset_index(drop=True,inplace=True)
In [885...
         asset=df.ASSETS
In [886...
          asset_rupee = []
          for i in asset:
              part = i.split('Rs ')
              if len(part) > 1:
                  rah = part[1].split('\n')[0].replace(',', '')
                  asset_rupee.append(int(rah))
                  asset_rupee.append(None)
          # Convert 'asset rupee' list to a DataFrame and assign it to the 'ASSETS' column
          df['ASSETS'] = asset_rupee
In [889... df.ASSETS=asset_rupee
          total_asset=df.groupby('PARTY')['ASSETS'].sum().sort_values(ascending=False).head(20)
          sns.barplot(x=total_asset,y=total_asset.index)
Out[890]: <Axes: xlabel='ASSETS', ylabel='PARTY'>
                 INC
                 BJP
              YSRCP
                TDP
                BSP
                 IND
                  SP
                TRS
                NCP
                DMK
                SAD
               JD(S)
                SHS
                 BJD
                VBA
               MNM
                 JnP
                AITC
```

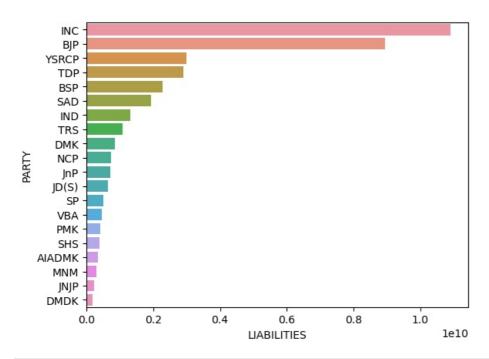
ASSETS

1e10

```
In [ ]:
In [833...
         # Enter The name of the party to see the Assets
         def asset():
             party=input('Enter the name of Party: ')
             new df=df[df.PARTY==party]
             ab=new df.groupby('NAME')['ASSETS'].sum().sort values(ascending=False).head(20)
             sns.barplot(x=ab,y=ab.index)
In [834... asset()
         Enter the name of Party: BJP
                                   HEMA MALINI
                         MALA RAJYA LAXMI SHAH
                         KANWAR SINGH TANWAR
                               GAUTAM GAMBHIR
                                  KILARU DILEEP
            Ranjeetsinha Hindurao Naik- Nimbalkar
                                 Anurag Sharma
                         Sukhbir Singh Jaunapuria
                              B. Janardhan Reddy
                               B.N.Bache Gowda
                            ARVIND DHARMAPURI
                                   SUNNY DEOL
                                     ARUNA D.K
                                   JAYANT SINHA
                                     P. C. Mohan
                                     UDASI. S.C.
                              B.Y.RAGHAVENDRA.
                            RADHAKRISHNAN, C.P.
                                     QUEEN OJA
                           Sunil Baburao Mendhe
                                                           0.5
                                                                                                2.0
                                                                       1.0
                                                                                    1.5
                                                                                                            2.5
                                                                                                             1e9
                                                                             ASSETS
```

Liabilities Analysis

```
In [835... # Liablities of Party's candidate
          liab=df.LIABILITIES
In [836...
In [837...
          liab[0]
           'Rs 2,31,450\n ~ 2 Lacs+'
Out[837]:
In [838...
          liab_rupee=[]
          for i in liab:
              parts=i.split('Rs ')
              if len(parts)>1:
                  lb = parts[1].split('\n')[0].replace(',', '')
                  liab_rupee.append(int(lb))
                  liab rupee.append(None)
In [839... df.LIABILITIES=liab_rupee
          total_liab=df.groupby('PARTY')['LIABILITIES'].sum().sort_values(ascending=False).head(20)
In [840...
          sns.barplot(x=total_liab,y=total_liab.index)
Out[840]: <Axes: xlabel='LIABILITIES', ylabel='PARTY'>
```

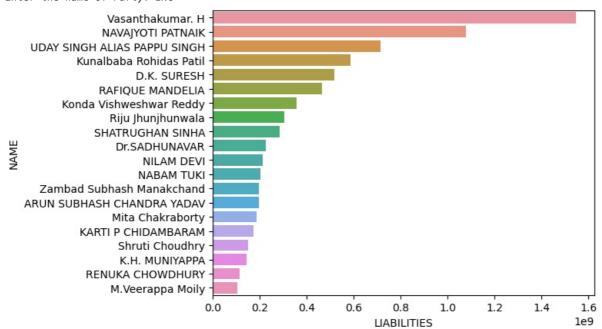


```
# Enter The name of the party to see the LIABILITIES

def liab():
    party=input('Enter the name of Party: ')
    new_df=df[df.PARTY==party]
    ab=new_df.groupby('NAME')['LIABILITIES'].sum().sort_values(ascending=False).head(20)
    sns.barplot(x=ab,y=ab.index)
```

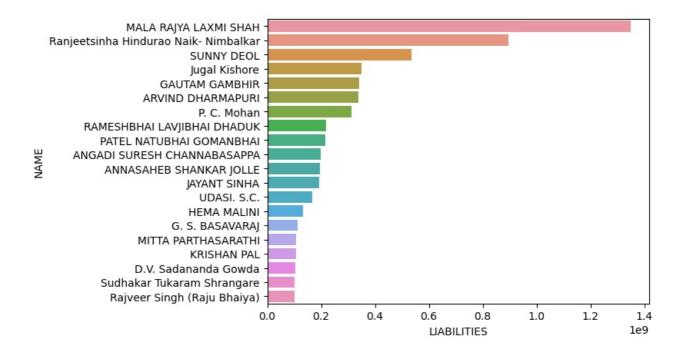
In [842... liab()

Enter the name of Party: INC



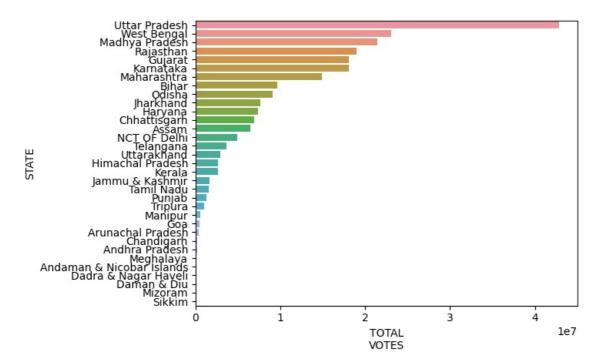
In [734... liab()

Enter the name of Party: BJP



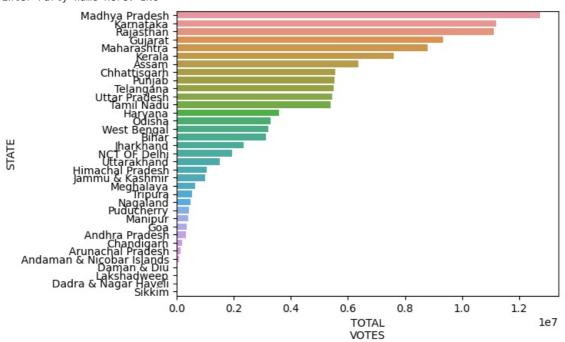
General & Postal & Total votes Analysis

```
In [737... # General & Postal & Total votes
           def votes():
               party=input('Enter Party name Here: ')
               vote=df[df.PARTY==party]
               print(f'Total General Votes got by {party}: ',vote['GENERAL\nVOTES'].sum())
               print(f'Postal Votes got by {party}: ',vote['POSTAL\nVOTES'].sum())
print(f'Postal Votes got by {party}: ',vote['TOTAL\nVOTES'].sum())
In [738... votes()
           Enter Party name Here: BJP
           General Votes got by BJP: 227923509
          Postal Votes got by BJP: 1015047
Postal Votes got by BJP: 228938556
In [747... votes()
           Enter Party name Here: BSP
           General Votes got by BSP: 20749113
          Postal Votes got by BSP: 59081
Postal Votes got by BSP: 20808194
In [742… # Votes got by each party from each State
           def vote_state():
               party=input('Enter Party name Here: ')
               vote=df[df.PARTY==party]
               vote_st=vote.groupby('STATE')['TOTAL\nVOTES'].sum().sort_values(ascending=False)
               sns.barplot(x=vote st,y=vote st.index)
In [743... vote state()
           Enter Party name Here: BJP
```



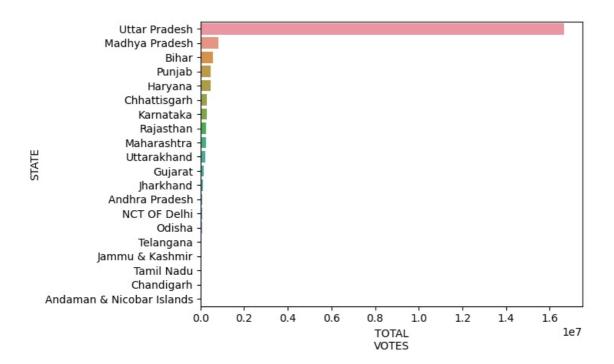
In [744... vote_state()

Enter Party name Here: INC



In [745... vote_state()

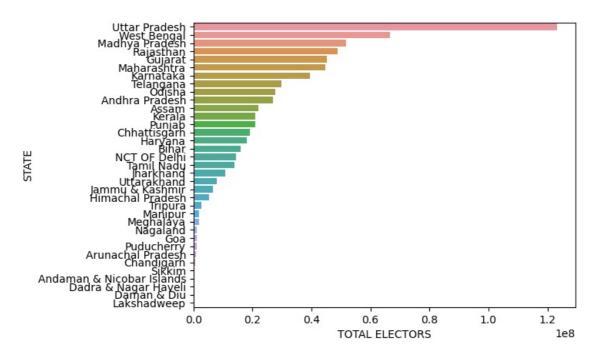
Enter Party name Here: BSP



Electors Analysis

```
In [749... # Total Electors in a particualr Party(Enter the party name to see their total Electors)
             def electors():
                   party=input('Enter Party name Here: ')
                    vote=df[df.PARTY==party]
                   vote st=vote.groupby('STATE')['TOTAL ELECTORS'].sum().sort_values(ascending=False)
                   sns.barplot(x=vote_st,y=vote_st.index)
In [750... electors()
             Enter Party name Here: BJP
                                Uttar Pradesh
West Bengal
Madhya Pradesh
Karnataka
Rajasthan
Maharashtra
Gujarat
                              Andhra Pradesh
NCT OF Delhi
Tamil Nadu
Jammu & Kashmir
Uttarakhand
Himachal Pradesh
                              Arunachal Pradesh
                  Aldılacılar Pladesi
Mizoram
Chandigarh
Sikkim
Andaman & Nicobar Islands
Dadra & Nagar Haveli
Daman & Diu
                                                                   0.2
                                                                                0.4
                                                                                            0.6
                                                                                                         0.8
                                                                                                                      1.0
                                                                                                                                  1.2
                                                                                                                                               1.4
                                                                                            TOTAL ELECTORS
                                                                                                                                                  1e8
```

In [751= electors()
Enter Party name Here: INC



In []: # Analysis by rahul badola-#contact- contact.rahulbadola@gmail.com

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