MANOJ.S

2018 Karnataka (India) State Election Results

Elections were held in Karnataka on 12 May 2018 in 222 constituencies of the Karnataka Legislative Assembly. This dataset provides the outcomes of the election.

In [1]:

```
#importing the libraries and data
import numpy as np
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
from datetime import date, timedelta, datetime
```

In [2]:

```
df = pd.read_csv('Karnataka Assembly Elections 2018 All State MLA Winners List OpenCity.
csv')
df
```

Out[2]:

	AC No.	AC Name	Winning Party	Winning Candidate	Winner Votes	Runner Up Party	Runner Up Candidate	Runner Up Votes	Voting Turnout %	Total Voters	Win Ma
0	1	Nippani	ВЈР	SHASHIKALA JOLLE	87,006	INC	KAKASO PANDURANG PATIL	78,500	81.19%	211,827	8
1	2	Chikkodi- Sadalga	INC	GANESH HUKKERI	91,467	ВЈР	ANNASAHEB SHANKAR JOLLE	80,898	84.78%	210,480	10
2	3	Athani	INC	MAHESH IRANAGOUDA KUMATHALLI	82,094	ВЈР	LAXMAN SANGAPPA SAVADI	79,763	80.67%	213,935	2
3	4	Kagwad	INC	BALASAHEB PATIL	83,060	ВЈР	BHARAMAGOUDA ALAGOUDA KAGE	50,118	79.98%	181,486	32
4	5	Kudachi	ВЈР	P RAJIV	67,781	INC	AMIT SHAMA GHATAGE	52,773	75.86%	180,233	15
219	220	T. Narasipur	JDS	ASHWIN KUMAR	83,929	INC	DR. H.C.MAHADEVAPPA	55,451	78.08%	198,434	28
220	221	Hanur	INC	R NARENDRA	60,444	ВЈР	DR. PREETHAN NAGAPPA	56,931	81.61%	207,603	:
221	222	Kollegal	OTHERS	N MAHESH	71,792	INC	A.R. KRISHNA MURTHY	52,338	79.15%	211,522	19
222	223	Chamarajanagar	INC	PUTTARANGA SHETTY	75,963	ВЈР	K R MALLIKARJUNAPPA	71,050	80.41%	206,146	4
223	224	Gundlupet	ВЈР	C S NIRANJANKUMAR	94,151	INC	M C MOHAN KUMARI URUF GEETHA	77,467	87.50%	205,616	16

224 rows × 12 columns

```
Runner
                                                                      Runner
                                                                               Voting
   AC
                 Winning
                              Winning
                                     Winner
                                                            Runner Up
                                                                                        Total Winning
                                                                                                        District
       AC Name
                                                                         Up
                                                                             Turnout
                                                 Up
   No.
                   Party
                            Candidate
                                       Votes
                                                            Candidate
                                                                                       Voters
                                                                                              Margin
                                                                                                         Name
                                               Party
                                                                       Votes
                                                             KAKASO
                          SHASHIKALA
     1
         Nippani
                    BJP
                                       87,006
                                                INC
                                                         PANDURANG
                                                                       78,500
                                                                              81.19% 211,827
                                                                                                8,506 BELAGAV
                               JOLLE
                                                               PATIL
       Chikkodi-
                             GANESH
                                                          ANNASAHEB
1
     2
                    INC
                                       91,467
                                                BJP
                                                                       80,898
                                                                              84.78% 210,480
                                                                                               10,569 BELAGAV
         Sadalga
                             HUKKERI
                                                      SHANKAR JOLLE
                             MAHESH
                                                             LAXMAN
                         IRANAGOUDA
                                                           SANGAPPA
2
     3
          Athani
                    INC
                                       82,094
                                                BJP
                                                                       79,763 80.67% 213,935
                                                                                                2,331 BELAGAV
                         KUMATHALLI
                                                              SAVADI
                          BALASAHEB
                                                     BHARAMAGOUDA
3
                    INC
                                       83,060
                                                BJP
                                                                              79.98% 181,486
                                                                                               32,942 BELAGAV
        Kagwad
                                                                       50,118
                                PATIL
                                                     ALAGOUDA KAGE
                                                         AMIT SHAMA
                                                INC
        Kudachi
                    BJP
                              P RAJIV 67,781
                                                                       52,773 75.86% 180,233
                                                                                               15,008 BELAGAV
     5
                                                            GHATAGE
                                                                                                            F
In [5]:
df.columns
Out[5]:
Index(['AC No.', 'AC Name', 'Winning Party', 'Winning Candidate',
        'Winner Votes', 'Runner Up Party', 'Runner Up Candidate',
        'Runner Up Votes', 'Voting Turnout %', 'Total Voters', 'Winning Margin',
        'District Name'],
       dtype='object')
In [6]:
df.tail()
Out[6]:
                                                                                            Voting
                                                         Runner
                                                                                    Runner
     AC
                         Winning
                                          Winning
                                                  Winner
                                                                         Runner Up
                                                                                                     Total
                                                                                                          Win
               AC Name
                                                             Up
                                                                                       Up
                                                                                           Turnout
     No.
                           Party
                                        Candidate
                                                   Votes
                                                                         Candidate
                                                                                                    Voters
                                                                                                            Ma
                                                           Party
                                                                                     Votes
                                                                               DR.
219 220
             T. Narasipur
                            JDS
                                  ASHWIN KUMAR
                                                  83.929
                                                                                                            28
                                                            INC
                                                                                    55,451
                                                                                            78.08% 198,434
                                                                 H.C.MAHADEVAPPA
                                                                     DR. PREETHAN
                                     R NARENDRA
220 221
                  Hanur
                            INC
                                                  60,444
                                                            BJP
                                                                                    56,931
                                                                                           81.61% 207,603
                                                                                                             3
                                                                         NAGAPPA
                                                                      A.R. KRISHNA
221 222
                Kollegal OTHERS
                                       N MAHESH
                                                  71,792
                                                            INC
                                                                                    52,338
                                                                                            79.15% 211,522
                                                                                                            19
                                                                           MURTHY
                                     PUTTARANGA
                                                                               KR
222 223 Chamarajanagar
                            INC
                                                  75,963
                                                            BJP
                                                                                    71,050
                                                                                           80.41% 206,146
                                                                 MALLIKARJUNAPPA
                                          SHETTY
                                                                        M C MOHAN
                                              CS
223 224
              Gundlupet
                                                  94,151
                                                            INC
                                                                      KUMARI URUF
                                                                                    77,467 87.50% 205,616
                                                                                                            16
                                 NIRANJANKUMAR
                                                                           GEETHA
In [7]:
np.random.seed(42)
```

df.shape
Out[3]:

(224, 12)

In [4]:

Out[4]:

df.head()

```
obs, feat = df.shape
df.sample(5)
```

Out[7]:

	AC No.	AC Name	Winning Party	Winning Candidate	Winner Votes	Runner Up Party	Runner Up Candidate	Runner Up Votes	Voting Turnout %	Total Voters	Winning Margin	
•	9 10	Yemkanamardi	INC	SATISH. L. JARKIHOLI	73,512	ВЈР	ASTAGI MARUTI MALLAPPA	70,662	79.79%	186,859	2,850	
84	l 85	Byadgi	ВЈР	BALLARY VIRUPAKSHAPPA RUDRAPPA	91,721	INC	S.R.PATIL	70,450	82.57%	200,760	21,271	
117	7 118	Baindur	ВЈР	B. M. SUKUMAR SHETTY	96,029	INC	K. GOPALA POOJARY	71,636	78.93%	222,427	24,393	
144	145	Mulbagal	OTHERS	H.NAGESH	74,213	JDS	SAMRUDDHI MANJUNATH	67,498	79.96%	203,376	6,715	
22 ·	1 222	Kollegal	OTHERS	N MAHESH	71,792	INC	A.R. KRISHNA MURTHY	52,338	79.15%	211,522	19,454	СН
4												Þ

In [8]:

```
#calculating missing values in rows
df.isnull().sum()
```

Out[8]:

AC No.	0
AC Name	0
Winning Party	0
Winning Candidate	0
Winner Votes	0
Runner Up Party	0
Runner Up Candidate	0
Runner Up Votes	0
Voting Turnout %	0
Total Voters	1
Winning Margin	0
District Name	0
dtype: int64	

In [9]:

Totals = pd.read_csv('Karnataka Assembly Elections 2018 All State MLA Winners List OpenC
ity.csv')
Totals.sample(5)

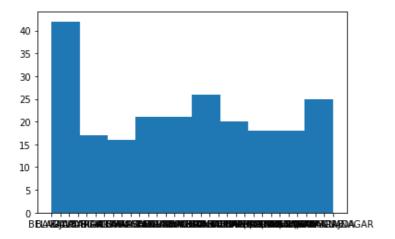
Out[9]:

		AC No.	AC Name	Winning Party	Winning Candidate	Winner Votes	Runner Up Party	Runner Up Candidate	Runner Up Votes	Voting Turnout %	Total Voters	Winning Margin	
	69	70	Kundgol	INC	C S SHIVALLI	64,871	ВЈР	CHIKKANAGOUDRA SIDDANAGOUD ISHWARAGOD	64,237	78.27%	187,513	634	
	30	31	Nagthan	JDS	DEVANAND FULASING CHAVAN	59,709	INC	KATAKADOND VITTAL DONDIBA	54,108	62.95%	260,382	5,601	
	39	40	Chittapur	INC	PRIYANK KHARIGE	69,700	ВЈР	VALMIK NAIK	65,307	60.34%	231,920	4,393	
:	221	222	Kollegal	OTHERS	N MAHESH	71,792	INC	A.R. KRISHNA MURTHY	52,338	79.15%	211,522	19,454	CH/
	193	194	Mudiaere	R.IP	MP	58 783	INC	ΜΩΤΔΜΜΔ	46 271	76 79%	170 250	12 512	C

```
1011070 110,200 12,012
    KUMARSWAMY 55,755
                                                                     Runner Voting
                                             Runner
                               Winning Winner
                                                            Runner Up
                                                                                      Total Winning
     AC
                  Winning
In [10]:
df.describe()
Out[10]:
         AC No.
count 224.000000
mean 112.500000
  std 64.807407
       1.000000
  min
 25%
      56.750000
 50% 112.500000
 75% 168.250000
 max 224.000000
In [11]:
df.info()
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 224 entries, 0 to 223
Data columns (total 12 columns):
 # Column
                           Non-Null Count Dtype
___
    _____
                             -----
 0 AC No.
                           224 non-null
                                              int64
 1 AC Name
                           224 non-null
                                             object
AC Name 224 non-null
Winning Party 224 non-null
Winning Candidate 224 non-null
Winner Votes 224 non-null
Runner Up Party 224 non-null
                                             object
                                             object
                                              object
                                              object
 6 Runner Up Candidate 224 non-null
7 Runner Up Votes 224 non-null
8 Voting Turnout % 224 non-null
                                              object
                                            object
                                            object
     Total Voters
 9
                            223 non-null object
 10 Winning Margin
                           224 non-null object
 11 District Name
                            224 non-null object
dtypes: int64(1), object(11)
memory usage: 21.1+ KB
In [12]:
df.dtypes
Out[12]:
AC No.
                          int64
AC Name
                         object
Winning Party
                        object
Winning Candidate
                        object
Winner Votes
                        object
Runner Up Party object
Runner Up Candidate object
Runner Up Votes object Voting Turnout % object
Total Voters
                        object
Winning Margin
                        object
District Name
                         object
dtype: object
In [13]:
plt.hist(df['District Name'])
```

Out[13]:

```
(array([42., 17., 16., 21., 21., 26., 20., 18., 18., 25.]),
  array([ 0. , 3.2, 6.4, 9.6, 12.8, 16. , 19.2, 22.4, 25.6, 28.8, 32. ]),
  <BarContainer object of 10 artists>)
```



In [14]:

```
df.describe(include=['object'])
```

Out[14]:

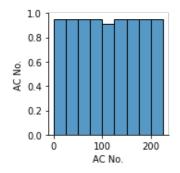
	AC Name	Winning Party	Winning Candidate	Winner Votes	Runner Up Party	Runner Up Candidate	Runner Up Votes	Voting Turnout %	Total Voters	Winning Margin	District Name
count	224	224	224	224	224	224	224	224	223	224	224
unique	223	5	221	223	9	223	222	214	223	222	33
top	Vijayanagar	ВЈР	M KRISHNAPPA	-	INC	-	59,335	72.34%	211,827	21,271	BELAGAVI
freq	2	104	2	2	112	2	2	2	1	2	18

In [15]:

```
# Visulaizing the Pairplot of complete dataset
sns.pairplot(df)
```

Out[15]:

<seaborn.axisgrid.PairGrid at 0x21a30331b20>



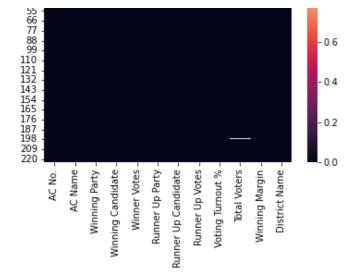
In [16]:

```
sns.heatmap(df.isna())
```

Out[16]:

<AxesSubplot:>

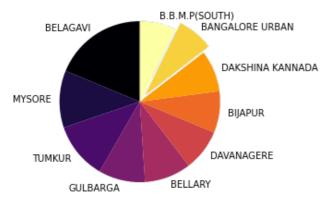




In [17]:

```
df['District Name'].value_counts().head(10).plot(kind='pie',cmap='inferno',startangle=90
,explode=[0,0,0,0,0,0,0,0,0,0])
plt.title('Countries having Highest Number of Players',fontsize=15)
plt.axis('off')
plt.show()
```

Countries having Highest Number of Players



data cleaning

In [18]:

```
#1.missing value treatment
df.isnull().sum()
```

Out[18]:

```
0
AC No.
AC Name
                        0
Winning Party
                        0
Winning Candidate
Winner Votes
Runner Up Party
                        0
Runner Up Candidate
                        0
Runner Up Votes
                        0
Voting Turnout %
                        0
Total Voters
                        1
                        0
Winning Margin
District Name
dtype: int64
```

In [19]:

```
df['Total Voters'].dtype
```

Out[19]:

```
In [20]:
def removecomma(values):
     values=str(values)
     values=int(values.replace(',',''))
     return values
In [21]:
def handlecomma(value):
     value = str(value)
     if ',' in value:
          value = value.replace(',', '')
          return float(value)
     else:
          return float(value)
In [22]:
df['Winner Votes'].unique()
Out[22]:
array(['87,006', '91,467', '82,094', '83,060', '67,781', '67,502',
         '83,588', '96,144', '90,249', '73,512', '79,060', '84,498', '102,040', '36,649', '73,155', '47,040', '62,480', '68,349', '76,431', '87,213', '49,245', '85,135', '67,599', '85,653', '65,012', '63,512', '48,245', '58,647', '98,339', '76,308', '59,709', '50,401', '70,865', '71,735', '68,508', '104,426', '78,642', '62,227', '79,627', '69,700', '80,668', '73,905', '61,750', '64,788', '64,311', '76,815', '61,425', '74,945',
         '61,750', '64,788', '64,311', '76,815', '61,425', '74,945',
         '55,107', '73,270', '84,673', '75,061', '66,656', '56,511',
         '53,548', '67,003', '54,230', '71,514', '60,387', '87,567',
         '87,735', '67,617', '79,072', '98,783', '91,967', '77,699',
         '83,735', '73,045', '65,718', '64,871', '85,123', '77,080',
         '75,794', '96,462', '83,267', '61,577', '60,339', '59,392',
         '83,172', '70,595', '66,290', '80,529', '83,868', '86,565',
         '91,721', '72,461', '63,910', '54,097', '78,337', '83,214',
         '80,592', '82,546', '79,186', '76,589', '78,106', '50,085',
         '84,018', '72,874', '82,896', '77,733', '90,562', '107,976',
         '78,948', '67,603', '64,801', '76,540', '71,369', '50,556',
         '73,794', '80,624', '69,326', '75,722', '104,027', '67,527'
         '86,983', '72,091', '78,475', '96,029', '103,434', '84,946',
         '75,893', '91,245', '62,780', '58,783', '70,863', '44,940',
         '62,232', '69,612', '61,383', '60,710', '58,697', '60,421',
         '82,740', '81,598', '55,572', '74,338', '72,974', '88,521',
         '69,000', '65,710', '82,006', '76,240', '87,753', '93,571', '74,213', '71,151', '70,871', '82,788', '75,677', '120,110',
         '135,404', '114,964', '115,273', '-', '94,044', '88,218', '83,130', '74,453', '97,574', '109,955', '58,887', '59,742', '60,009', '47,354', '56,271', '79,135', '73,353', '65,339', '57,312',
         '76,018', '77,868', '67,085', '141,682', '111,863', '152,469',
         '113,894', '98,824', '86,966', '73,225', '69,277', '119,492',
         '92,626', '127,552', '87,995', '103,038', '109,239', '96,003',
         '69,421', '101,307', '112,396', '88,016', '105,516', '93,986',
         '64,268', '63,348', '108,541', '85,064', '62,262', '98,417',
         '87,444', '98,648', '86,545', '80,813', '97,802', '90,073',
         '95,205', '70,631', '77,944', '77,770', '85,011', '91,667', '76,652', '78,030', '121,325', '78,573', '51,683', '62,268',
         '96,435', '83,929', '60,444', '71,792', '75,963', '94,151'],
       dtype=object)
In [23]:
```

dtype('0')

def handleline(value):
 value = str(value)

if ',' or '-' or '%' in value:

value = value.replace(',','')
value = value.replace('-', '3000')

```
value = value.replace('%','')
    return float(value)
else:
    return float(value)
In [24]:
```

```
df['Total Voters'] = df['Total Voters'].apply(handlecomma)
```

In [25]:

```
df['Winner Votes'] = df['Winner Votes'].apply(handleline)
```

In [26]:

```
df['Runner Up Votes']=df['Runner Up Votes'].apply(handleline)
```

In [27]:

```
df['Voting Turnout %']=df['Voting Turnout %'].apply(handleline)
```

In [28]:

```
df['Winning Margin']=df['Winning Margin'].apply(handleline)
```

In [29]:

df.head()

Out[29]:

	AC No.	AC Name	Winning Party	Winning Candidate	Winner Votes	Runner Up Party	Runner Up Candidate	Runner Up Votes	Voting Turnout %	Total Voters	Winning Margin	Distr Nar
0	1	Nippani	ВЈР	SHASHIKALA JOLLE	87006.0	INC	KAKASO PANDURANG PATIL	78500.0	81.19	211827.0	8506.0	BELAG#
1	2	Chikkodi- Sadalga	INC	GANESH HUKKERI	91467.0	ВЈР	ANNASAHEB SHANKAR JOLLE	80898.0	84.78	210480.0	10569.0	BELAG#
2	3	Athani	INC	MAHESH IRANAGOUDA KUMATHALLI	82094.0	ВЈР	LAXMAN SANGAPPA SAVADI	79763.0	80.67	213935.0	2331.0	BELAG/
3	4	Kagwad	INC	BALASAHEB PATIL	83060.0	ВЈР	BHARAMAGOUDA ALAGOUDA KAGE	50118.0	79.98	181486.0	32942.0	BELAG#
4	5	Kudachi	ВЈР	P RAJIV	67781.0	INC	AMIT SHAMA GHATAGE	52773.0	75.86	180233.0	15008.0	BELAG#
4												•

In [30]:

df.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 224 entries, 0 to 223
Data columns (total 12 columns):

#	Column	Non-Null Count	Dtype
0	AC No.	224 non-null	int64
1	AC Name	224 non-null	object
2	Winning Party	224 non-null	object
3	Winning Candidate	224 non-null	object
4	Winner Votes	224 non-null	float64
5	Runner Up Party	224 non-null	object
6	Runner Up Candidate	224 non-null	object
7	Runner Up Votes	224 non-null	float64
8	Voting Turnout %	224 non-null	float64
9	Total Voters	223 non-null	float64
1 0	Winning Margin	224 non-nii11	float64

```
11 District Name 224 non-null object dtypes: float64(5), int64(1), object(6) memory usage: 21.1+ KB

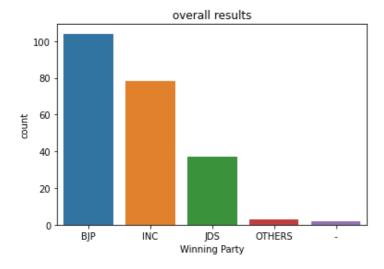
In []:

In []:
```

Data visualization

```
In [31]:
```

```
sns.countplot(x='Winning Party', data=df)
plt.title('overall results')
plt.show()
```

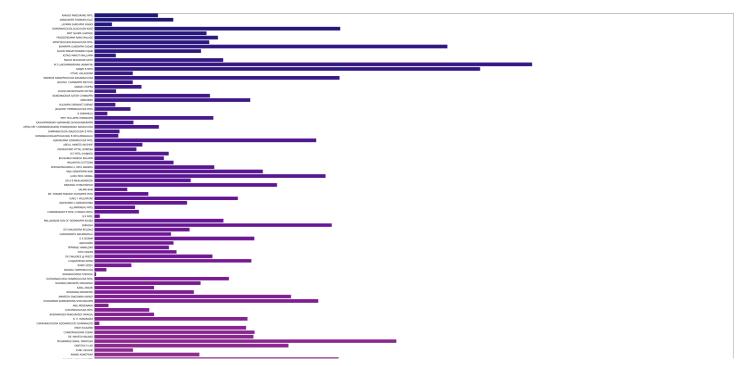


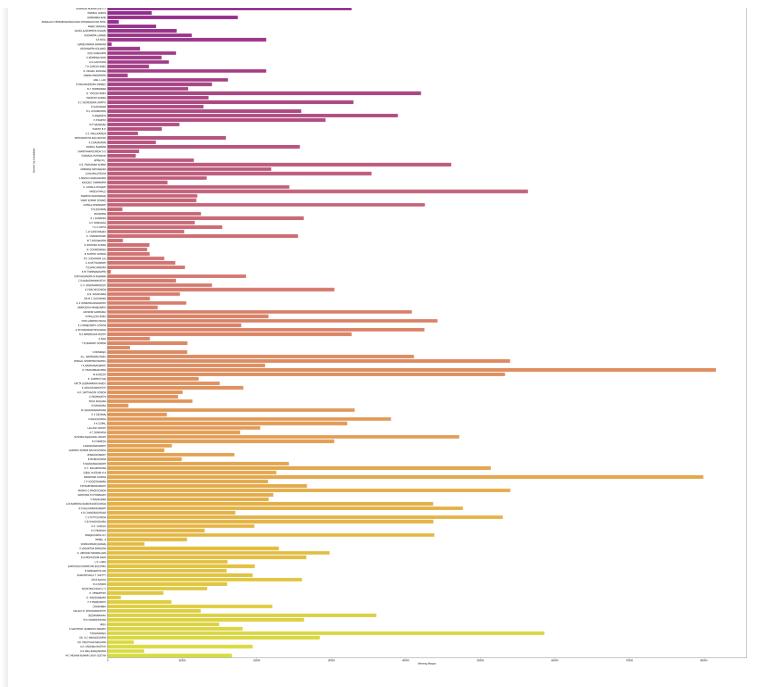
In [32]:

```
plt.figure(figsize=(50,80))
sns.barplot(y ='Runner Up Candidate', x ='Winning Margin', data = df, palette ='plasma',
orient="h")
```

Out[32]:

<AxesSubplot:xlabel='Winning Margin', ylabel='Runner Up Candidate'>



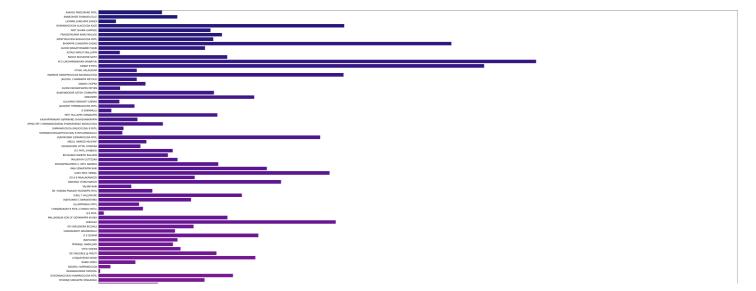


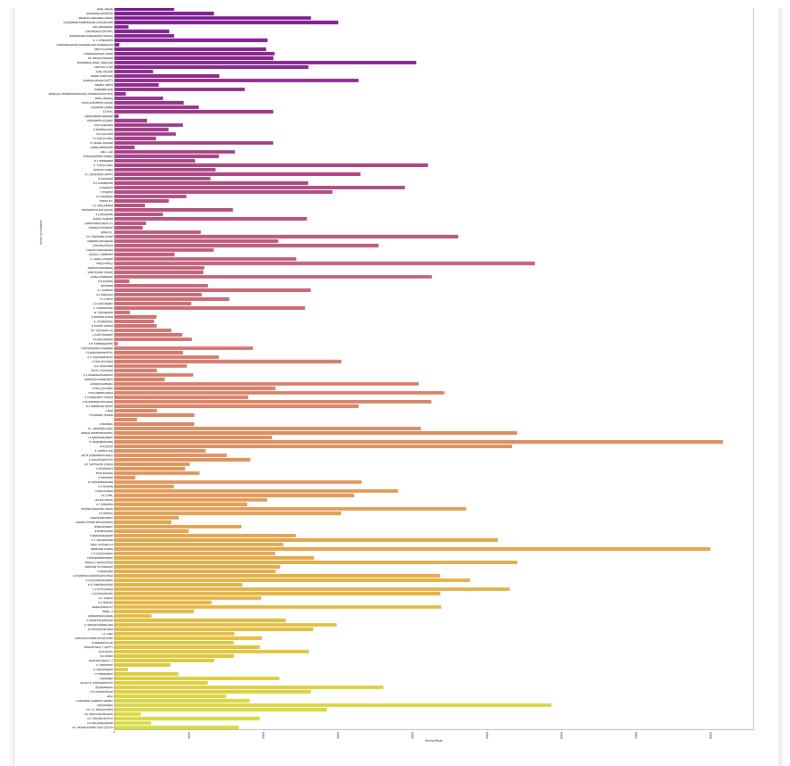
In [33]:

```
import matplotlib.pylab as plt
plt.figure(figsize=(50,80))
plt.xticks(rotation=90)
sns.barplot(y='Runner Up Candidate', x ='Winning Margin', data = df, palette ='plasma')
```

Out[33]:

<AxesSubplot:xlabel='Winning Margin', ylabel='Runner Up Candidate'>



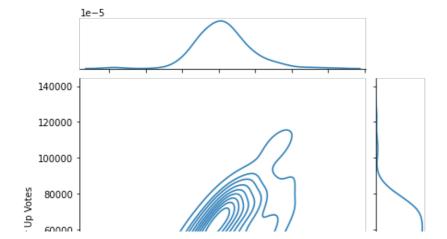


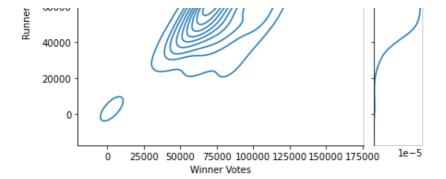
In [34]:

```
sns.jointplot(y ='Runner Up Votes', x ='Winner Votes', data = df, kind ='kde')
# KDE shows the density where the points match up the most
```

Out[34]:

<seaborn.axisgrid.JointGrid at 0x21a32254940>



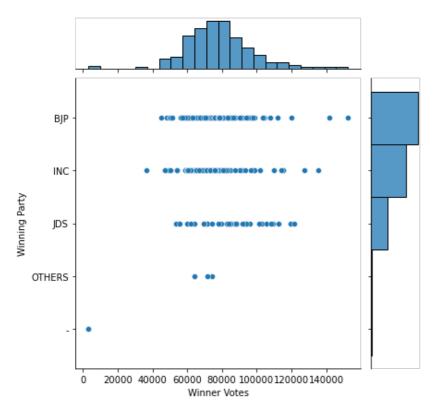


In [35]:

#Joinplot #It is used to draw a plot of two variables with bivariate and univariate graphs. It basi cally combines two different plots. sns.jointplot(x = 'Winner Votes', y = 'Winning Party', data = df)

Out[35]:

<seaborn.axisgrid.JointGrid at 0x21a39918b20>



In [36]:

```
# set the background style of the plot
#Displot t is used basically for univariant set of observations and visualizes it through
a histogram i.e. only one observation and hence we choose one particular column of the da
taset.
sns.set_style('whitegrid')
sns.distplot(df['Winner Votes'], kde = False, color = 'red', bins = 30)
```

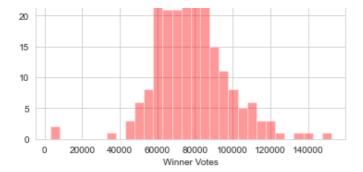
C:\Users\Manoj\anaconda3\lib\site-packages\seaborn\distributions.py:2619: FutureWarning: `distplot` is a deprecated function and will be removed in a future version. Please adapt your code to use either `displot` (a figure-level function with similar flexibility) or `histplot` (an axes-level function for histograms).

warnings.warn(msg, FutureWarning)

Out[36]:

<AxesSubplot:xlabel='Winner Votes'>



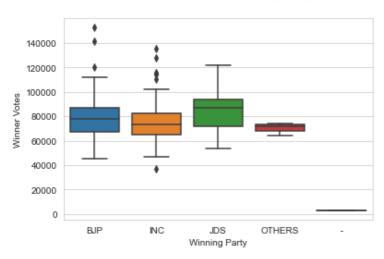


In [37]:

```
# x takes the categorical column and y is a numerical column
#box plot
sns.boxplot(x ='Winning Party', y ='Winner Votes', data = df)
```

Out[37]:

<AxesSubplot:xlabel='Winning Party', ylabel='Winner Votes'>

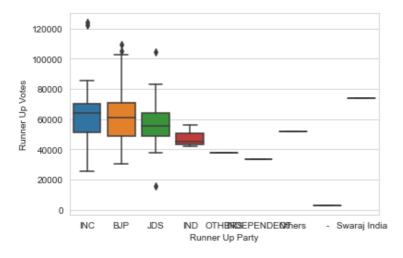


In [38]:

```
# x takes the categorical column and y is a numerical column
#box plot
sns.boxplot(x ='Runner Up Party', y ='Runner Up Votes', data = df)
```

Out[38]:

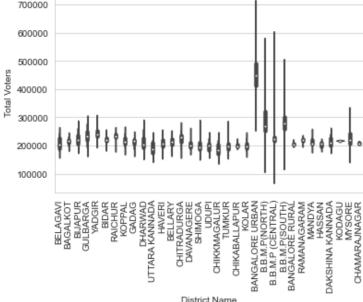
<AxesSubplot:xlabel='Runner Up Party', ylabel='Runner Up Votes'>



In [39]:

```
#Violinplot
#It is similar to the boxplot except that it provides a higher, more advanced visualizati
on and uses the kernel density
#estimation to give a better description about the data distribution.
sns.violinplot(x ='District Name', y ='Total Voters', data = df)
plt.xticks(rotation=90)
```

```
Out[39]:
(array([ 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16,
        17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32]),
 [Text(0, 0, 'BELAGAVI'),
 Text(1, 0, 'BAGALKOT'),
 Text(2, 0, 'BIJAPUR'),
 Text(3, 0, 'GULBARGA'),
 Text(4, 0, 'YADGIR'),
 Text(5, 0, 'BIDAR'),
 Text(6, 0, 'RAICHUR'),
 Text(7, 0,
            'KOPPAL'),
            'GADAG'),
 Text(8, 0,
 Text(9, 0, 'DHARWAD'),
 Text(10, 0, 'UTTARA KANNADA'),
 Text(11, 0, 'HAVERI'),
 Text(12, 0, 'BELLARY'),
 Text(13, 0, 'CHITRADURGA'),
 Text(14, 0, 'DAVANAGERE'),
 Text(15, 0, 'SHIMOGA'),
 Text(16, 0, 'UDUPI'),
 Text(17, 0, 'CHIKKMAGALUR'),
 Text(18, 0, 'TUMKUR'),
 Text(19, 0, 'CHIKABALLAPUR'),
 Text(20, 0, 'KOLAR'),
 Text(21, 0, 'BANGALORE URBAN'),
 Text(22, 0, 'B.B.M.P(NORTH)'),
 Text(23, 0, 'B.B.M.P (CENTRAL)'),
 Text(24, 0, 'B.B.M.P(SOUTH)'),
 Text (25, 0, 'BANGALORE RURAL'),
 Text(26, 0, 'RAMANAGARAM'),
 Text(27, 0, 'MANDYA'),
 Text(28, 0, 'HASSAN'),
 Text(29, 0, 'DAKSHINA KANNADA'),
 Text(30, 0, 'KODAGU'),
 Text(31, 0, 'MYSORE'),
 Text(32, 0, 'CHAMARAJNAGAR')])
  700000
  600000
  500000
  400000
```

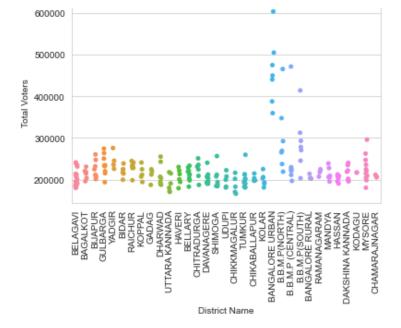


In [40]:

```
#Stripplot
#It basically creates a scatter plot based on the category.
sns.stripplot(x ='District Name', y ='Total Voters', data = df,orient="v")
plt.xticks(rotation=90)
plt.show
```

Out[40]:

<function matplotlib.pyplot.show(close=None, block=None)>



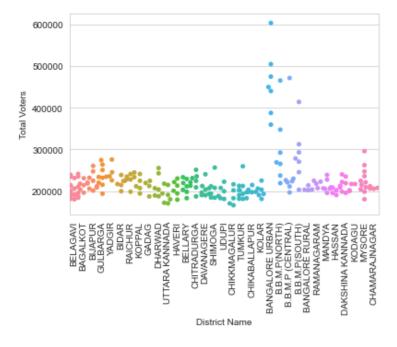
In [41]:

#Swarmplot

```
#It is very similar to the stripplot except the fact that the points are adjusted so that
they do not overlap.
#Some people also like combining the idea of a violin plot and a stripplot to form this p
lot.
#One drawback to using swarmplot is that sometimes they dont scale well to really large n
umbers and takes a lot of computation to arrange them.
#So in case we want to visualize a swarmplot properly we can plot it on top of a violinpl
ot.
import warnings
warnings.filterwarnings("ignore")
plt.xticks(rotation=90)
sns.swarmplot(x = 'District Name', y = 'Total Voters', data = df,orient="v")
```

Out[41]:

<AxesSubplot:xlabel='District Name', ylabel='Total Voters'>



In [42]:

```
#Factorplot
#It is the most general of all these plots and provides a parameter called kind to choose
the kind of plot we want thus saving us from the trouble of writing these plots separatel
y.
#The kind parameter can be bar, violin, swarm etc.
sns.factorplot(x ='District Name', y ='Total Voters', data = df, kind ='bar', orient="v")
plt.xticks(rotation=90)
```

```
Out[42]:
(array([ 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32]),
 [Text(0, 0, 'BELAGAVI'),
  Text(1, 0, 'BAGALKOT'),
  Text(2, 0, 'BIJAPUR'),
  Text(3, 0, 'GULBARGA'),
  Text(4, 0, 'YADGIR'),
  Text(5, 0, 'BIDAR'),
  Text(6, 0, 'RAICHUR'),
  Text(7, 0, 'KOPPAL'),
  Text(8, 0, 'GADAG'),
  Text(9, 0, 'DHARWAD'),
  Text(10, 0, 'UTTARA KANNADA'),
  Text(11, 0, 'HAVERI'),
  Text(12, 0, 'BELLARY'),
  Text(13, 0, 'CHITRADURGA'),
  Text(14, 0, 'DAVANAGERE'),
  Text(15, 0, 'SHIMOGA'),
  Text(16, 0, 'UDUPI'),
  Text(17, 0, 'CHIKKMAGALUR'),
  Text(18, 0, 'TUMKUR'),
  Text(19, 0, 'CHIKABALLAPUR'),
  Text(20, 0, 'KOLAR'),
  Text(21, 0, 'BANGALORE URBAN'),
  Text(22, 0, 'B.B.M.P(NORTH)'),
  Text(23, 0, 'B.B.M.P (CENTRAL)'),
  Text(24, 0, 'B.B.M.P(SOUTH)'),
  Text(25, 0, 'BANGALORE RURAL'),
  Text(26, 0, 'RAMANAGARAM'),
  Text(27, 0, 'MANDYA'),
  Text(28, 0, 'HASSAN'),
  Text(29, 0, 'DAKSHINA KANNADA'),
  Text(30, 0, 'KODAGU'),
  Text(31, 0, 'MYSORE'),
  Text(32, 0, 'CHAMARAJNAGAR')])
  500000
  400000
Total Voters
  300000
  200000
  100000
```

CHAMARAÜ

CHIIKABAÏ

District Name