

```
In [7]: import pandas as pd  
import numpy as np  
import matplotlib.pyplot as plt
```

```
In [8]: Ogun=pd.read_csv('OGUN_crosschecked.csv')  
Ogun
```

Out[8]:

	State	LGA	Ward	PU-Code	PU-Name	Accredited_Voters	Registered_Voters	Results_Found
0	OGUN	ABEOKUTA NORTH	IKEREKU	27-01-01-001	O.U.S PRY. SCHOOL IKEREKU I	64	607	True
1	OGUN	ABEOKUTA NORTH	IKEREKU	27-01-01-002	O.U.S PRY. SCHOOL IKEREKU II	137	775	True
2	OGUN	ABEOKUTA NORTH	IKEREKU	27-01-01-003	NEAR HOLY TRINITY CHURCH I	114	776	True
3	OGUN	ABEOKUTA NORTH	IKEREKU	27-01-01-004	NEAR HOLY TRINITY CHURCH II	94	635	True
4	OGUN	ABEOKUTA NORTH	IKEREKU	27-01-01-005	NEAR ITA OGBONI IDOMAPA I	149	750	True
...
4064	OGUN	SAGAMU	SURULERE	27-20-11-017	OPEN SPACE AT AKOREDE PHASE II	120	440	True
4065	OGUN	ODEDA	OBANTOKO	27-16-07-034	AFRICAN CHURCH NUR & PRY SCH. ABULE ODO ATOKUN	100	158	True

State	LGA	Ward	PU-Code	PU-Name	Accredited_Voters	Registered_Voters	Results_Found
4066 OGUN	OBAFEMI/OWODE	OWODE	27-15-03-035	OPEN SPACE AT TRANSFORMER JUNCTION,ELERE	54	118	True
4067 OGUN	IJEBU NORTH	AKO-ONIGBAGBO/GELETE	27-09-10-020	OPEN SPACE AT SHALLA BUS STOP,LUGBEDU	35	69	True
4068 OGUN	EGBADO SOUTH	IWOYE	27-05-04-020	AFRICAN NUR AND PRY SCHOOL GBOKOTO	47	92	True

4069 rows × 19 columns

In [9]: `Ogun.head(10)`

Out[9]:

	State	LGA	Ward	PU-Code	PU-Name	Accredited_Voters	Registered_Voters	Results_Found	Transcription_Count
0	OGUN	ABEOKUTA NORTH	IKEREKU	27-01-01-001	O.U.S PRY. SCHOOL IKEREKU I	64	607	True	-1
1	OGUN	ABEOKUTA NORTH	IKEREKU	27-01-01-002	O.U.S PRY. SCHOOL IKEREKU II	137	775	True	-1
2	OGUN	ABEOKUTA NORTH	IKEREKU	27-01-01-003	NEAR HOLY TRINITY CHURCH I	114	776	True	-1
3	OGUN	ABEOKUTA NORTH	IKEREKU	27-01-01-004	NEAR HOLY TRINITY CHURCH II	94	635	True	-1
4	OGUN	ABEOKUTA NORTH	IKEREKU	27-01-01-005	NEAR ITA OGBONI IDOMAPA I	149	750	True	-1
5	OGUN	ABEOKUTA NORTH	IKEREKU	27-01-01-006	NEAR ITA OGBONI IDOMAPA II	163	885	True	-1
6	OGUN	ABEOKUTA NORTH	IKEREKU	27-01-01-007	OJUDE AGBURIN	71	537	True	-1
7	OGUN	ABEOKUTA NORTH	IKEREKU	27-01-01-008	NEAR AROWOREHIN MOSQUE II	116	500	True	-1

	State	LGA	Ward	PU-Code	PU-Name	Accredited_Voters	Registered_Voters	Results_Found	Transcription_Count
8	OGUN	ABEOKUTA NORTH	IKEREKU	27-01-01-010	NEAR LASODE HOUSE I	120	646	True	-1
9	OGUN	ABEOKUTA NORTH	IKEREKU	27-01-01-011	NEAR LASODE HOUSE II	54	379	True	-1

In [10]: [Ogun.info\(\)](#)

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 4069 entries, 0 to 4068
Data columns (total 19 columns):
 #   Column           Non-Null Count  Dtype  
--- 
 0   State            4069 non-null    object  
 1   LGA              4069 non-null    object  
 2   Ward              4069 non-null    object  
 3   PU-Code          4069 non-null    object  
 4   PU-Name          4069 non-null    object  
 5   Accredited_Voters 4069 non-null    int64  
 6   Registered_Voters 4069 non-null    int64  
 7   Results_Found    4069 non-null    bool   
 8   Transcription_Count 4069 non-null    int64  
 9   Result_Sheet_Stamped 4069 non-null    bool   
 10  Result_Sheet_Corrected 4069 non-null    bool   
 11  Result_Sheet_Invalid 4069 non-null    bool   
 12  Result_Sheet_Unclear 4069 non-null    bool   
 13  Result_Sheet_Unsigned 4069 non-null    object  
 14  APC              4069 non-null    int64  
 15  LP               4069 non-null    int64  
 16  PDP              4069 non-null    int64  
 17  NNPP             4069 non-null    int64  
 18  Results_File     4069 non-null    object  
dtypes: bool(5), int64(7), object(7)
memory usage: 465.0+ KB
```

```
In [11]: Ogun.shape
```

```
Out[11]: (4069, 19)
```

```
In [12]: Ogun.describe()
```

Out[12]:

	Accredited_Voters	Registered_Voters	Transcription_Count	APC	LP	PDP	NNPP
count	4069.000000	4069.000000	4069.0	4069.000000	4069.000000	4069.000000	4069.000000
mean	121.394692	526.644876	-1.0	64.809044	16.476038	23.779553	0.540182
std	66.333400	419.188542	0.0	41.844707	25.936135	23.525218	4.114054
min	0.000000	25.000000	-1.0	0.000000	0.000000	0.000000	0.000000
25%	70.000000	204.000000	-1.0	34.000000	2.000000	8.000000	0.000000
50%	112.000000	469.000000	-1.0	59.000000	8.000000	17.000000	0.000000
75%	161.000000	750.000000	-1.0	89.000000	20.000000	32.000000	0.000000
max	477.000000	4549.000000	-1.0	500.000000	500.000000	250.000000	200.000000

In [13]: Ogun.columns

```
Out[13]: Index(['State', 'LGA', 'Ward', 'PU-Code', 'PU-Name', 'Accredited_Voters',
       'Registered_Voters', 'Results_Found', 'Transcription_Count',
       'Result_Sheet_Stamped', 'Result_Sheet_Corrected',
       'Result_Sheet_Invalid', 'Result_Sheet_Unclear', 'Result_Sheet_Unsigned',
       'APC', 'LP', 'PDP', 'NNPP', 'Results_File'],
      dtype='object')
```

In [14]: # **1** Ensure all rows under 'State' are 'Ogun State, Nigeria'

```
Ogun['State'] = 'Ogun State, Nigeria'
Ogun
```

Out[14]:

	State	LGA	Ward	PU-Code	PU-Name	Accredited_Voters	Registered_Voters	Results_Found
0	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-001	O.U.S PRY. SCHOOL IKEREKU I	64	607	True
1	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-002	O.U.S PRY. SCHOOL IKEREKU II	137	775	True
2	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-003	NEAR HOLY TRINITY CHURCH I	114	776	True
3	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-004	NEAR HOLY TRINITY CHURCH II	94	635	True
4	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-005	NEAR ITA OGBONI IDOMAPA I	149	750	True
...
4064	Ogun State, Nigeria	SAGAMU	SURULERE	27-20-11-017	OPEN SPACE AT AKOREDE PHASE II	120	440	True
4065	Ogun State, Nigeria	ODEDA	OBANTOKO	27-16-07-034	AFRICAN CHURCH NUR & PRY SCH. ABULE ODO ATOKUN	100	158	True

	State	LGA	Ward	PU-Code	PU-Name	Accredited_Voters	Registered_Voters	Results_Found
4066	Ogun State, Nigeria	OBAFEMI/OWODE	OWODE	27-15-03-035	OPEN SPACE AT TRANSFORMER JUNCTION,ELERE	54	118	True
4067	Ogun State, Nigeria	IJEBU NORTH	AKO-ONIGBAGBO/GELETE	27-09-10-020	OPEN SPACE AT SHALLA BUS STOP,LUGBEDU	35	69	True
4068	Ogun State, Nigeria	EGBADO SOUTH	IWOYE	27-05-04-020	AFRICAN NUR AND PRY SCHOOL GBOKOTO	47	92	True

4069 rows × 19 columns

```
In [15]: # [2] Replace PRY. or Pry. with 'Primary' inside PU-Name column
Ogun['PU-Name'] = Ogun['PU-Name'].str.replace(r'(?i)\bpry[\.\_\_\/\:]*', 'PRIMARY', regex=True).str.strip()
Ogun
```

Out[15]:

	State	LGA	Ward	PU-Code	PU-Name	Accredited_Voters	Registered_Voters	Results_Found
0	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-001	O.U.S PRIMARY SCHOOL IKEREKU I	64	607	True
1	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-002	O.U.S PRIMARY SCHOOL IKEREKU II	137	775	True
2	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-003	NEAR HOLY TRINITY CHURCH I	114	776	True
3	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-004	NEAR HOLY TRINITY CHURCH II	94	635	True
4	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-005	NEAR ITA OGBONI IDOMAPA I	149	750	True
...
4064	Ogun State, Nigeria	SAGAMU	SURULERE	27-20-11-017	OPEN SPACE AT AKOREDE PHASE II	120	440	True
4065	Ogun State, Nigeria	ODEDA	OBANTOKO	27-16-07-034	AFRICAN CHURCH NUR & PRIMARY SCH. ABULE ODO AT...	100	158	True

	State	LGA	Ward	PU-Code	PU-Name	Accredited_Voters	Registered_Voters	Results_Found
4066	Ogun State, Nigeria	OBAFEMI/OWODE	OWODE	27-15-03-035	OPEN SPACE AT TRANSFORMER JUNCTION,ELERE	54	118	True
4067	Ogun State, Nigeria	IJEBU NORTH	AKO-ONIGBAGBO/GELETE	27-09-10-020	OPEN SPACE AT SHALLA BUS STOP,LUGBEDU	35	69	True
4068	Ogun State, Nigeria	EGBADO SOUTH	IWOYE	27-05-04-020	AFRICAN NUR AND PRIMARY SCHOOL GBOKOTO	47	92	True

4069 rows × 19 columns

```
In [16]: # [3] Replace 'UNKNOWN' in 'Result_Sheet_Unsigned' with 'Not Signed'
Ogun['Result_Sheet_Unsigned'] = Ogun['Result_Sheet_Unsigned'].replace('UNKNOWN', 'Not Signed')
Ogun
```

Out[16]:

	State	LGA	Ward	PU-Code	PU-Name	Accredited_Voters	Registered_Voters	Results_Found
0	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-001	O.U.S PRIMARY SCHOOL IKEREKU I	64	607	True
1	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-002	O.U.S PRIMARY SCHOOL IKEREKU II	137	775	True
2	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-003	NEAR HOLY TRINITY CHURCH I	114	776	True
3	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-004	NEAR HOLY TRINITY CHURCH II	94	635	True
4	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-005	NEAR ITA OGBONI IDOMAPA I	149	750	True
...
4064	Ogun State, Nigeria	SAGAMU	SURULERE	27-20-11-017	OPEN SPACE AT AKOREDE PHASE II	120	440	True
4065	Ogun State, Nigeria	ODEDA	OBANTOKO	27-16-07-034	AFRICAN CHURCH NUR & PRIMARY SCH. ABULE ODO AT...	100	158	True

	State	LGA	Ward	PU-Code	PU-Name	Accredited_Voters	Registered_Voters	Results_Found
4066	Ogun State, Nigeria	OBAFEMI/OWODE	OWODE	27-15-03-035	OPEN SPACE AT TRANSFORMER JUNCTION,ELERE	54	118	True
4067	Ogun State, Nigeria	IJEBU NORTH	AKO-ONIGBAGBO/GELETE	27-09-10-020	OPEN SPACE AT SHALLA BUS STOP,LUGBEDU	35	69	True
4068	Ogun State, Nigeria	EGBADO SOUTH	IWOYE	27-05-04-020	AFRICAN NUR AND PRIMARY SCHOOL GBOKOTO	47	92	True

4069 rows × 19 columns

```
In [17]: Ogun['LocationStr'] = Ogun['PU-Name'] + ', Polling Unit, ' + Ogun['LGA'] + ', Ogun State, Nigeria'
Ogun['LocationStr'].head(10)
```

```
Out[17]: 0    O.U.S PRIMARY SCHOOL IKEREKU I, Polling Unit, ...
1    O.U.S PRIMARY SCHOOL IKEREKU II, Polling Unit...
2    NEAR HOLY TRINITY CHURCH I, Polling Unit, ABEO...
3    NEAR HOLY TRINITY CHURCH II, Polling Unit, ABE...
4    NEAR ITA OGBONI IDOMAPA I, Polling Unit, ABEOK...
5    NEAR ITA OGBONI IDOMAPA II, Polling Unit, ABEO...
6    OJUDE AGBURIN, Polling Unit, ABEOKUTA NORTH, O...
7    NEAR AROWOREHIN MOSQUE II, Polling Unit, ABEOK...
8    NEAR LASODE HOUSE I, Polling Unit, ABEOKUTA NO...
9    NEAR LASODE HOUSE II, Polling Unit, ABEOKUTA N...
Name: LocationStr, dtype: object
```

```
In [18]: Ogun.head(10)
```

Out[18]:

	State	LGA	Ward	PU-Code	PU-Name	Accredited_Voters	Registered_Voters	Results_Found	Transcription_Count
0	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-001	O.U.S PRIMARY SCHOOL IKEREKU I	64	607	True	-1
1	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-002	O.U.S PRIMARY SCHOOL IKEREKU II	137	775	True	-1
2	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-003	NEAR HOLY TRINITY CHURCH I	114	776	True	-1
3	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-004	NEAR HOLY TRINITY CHURCH II	94	635	True	-1
4	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-005	NEAR ITA OGBONI IDOMAPA I	149	750	True	-1
5	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-006	NEAR ITA OGBONI IDOMAPA II	163	885	True	-1
6	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-007	OJUDE AGBURIN	71	537	True	-1

	State	LGA	Ward	PU-Code	PU-Name	Accredited_Voters	Registered_Voters	Results_Found	Transcription_Count
7	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-008	NEAR AROWOREHIN MOSQUE II	116	500	True	-1
8	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-010	NEAR LASODE HOUSE I	120	646	True	-1
9	Ogun State, Nigeria	ABEOKUTA NORTH	IKEREKU	27-01-01-011	NEAR LASODE HOUSE II	54	379	True	-1

```
In [34]: # Save the merged dataset with a new name
Ogun.to_csv('OGUN_with_coordinates.csv', index=False)
```

```
In [ ]:
```