

## **Assessment of marginal workers in Tamilnadu**

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### **Analysis:**

- As per data from <https://tn.data.gov.in/catalog/marginal-workers-classified-age-industrial-category-and-sex-census-2011-india-and-states>, the first classification of the working population is based on full time workers and part time workers. Full time working population is called Main Working Population and part time working population is called Marginal Working Population.
- The Main working population works mainly throughout the year, according to the labour force Indian District Database the workers who worked for more than 183 days in a year comes under this category.
- While the Marginal Working population do not work through the entire year but works on the seasonal basis or on a particular periods of year only. Marginal workers were those who worked any time at all in the year preceding the enumeration but did not work for a major part of the year, i.e., those who worked for less than 183 days (or six months).

- The main working population is further classified in to the following:

v **Cultivators:** A person was considered as cultivator if he or she was engaged either as employer, single worker or family worker in cultivation of land owned or held from government or held from private persons or institutions for payment in money, kind or share of crop. Cultivation included supervision or direction of cultivation. A person who had given out his/her land to another person or persons for cultivation or money, kind or share of crop and who did not even supervise or direct cultivation of land was not treated as cultivator. Similarly, a person working in another person's land for wages in cash or kind or a combination of both was not treated as cultivator. Cultivation involved ploughing, sowing and harvesting and production of cereals and millet crops such as wheat, paddy, jowar, bajra, ragi, etc., and pulses, raw jute and kindred fibre crop, cotton, etc., but did not include fruit growing, vegetable growing or keeping orchards or groves or working on plantations like tea, coffee, rubber, cinchona and other medicinal plantations.

v **Agricultural Labors:** A person who worked in another person's land for wages in cash, kind or share was regarded as an agricultural labourer. Such a person had no risk in cultivation but merely worked in another person's land for wages. An agricultural labourer had no right of lease or contract on land on which he worked.

v **Household Industry Worker:** A man who engaged primarily in one's own household duties or a boy or a girl who was primarily a student, even if such a person helped in the family economic activity but not as full time worker was not treated as worker. On the other hand, if a person was primarily engaged in some economic activity for major part of the year but at the same time also attended to some household chores or attended a night school etc., he or she was treated basically as a worker. In short we can say that any activity or work which is carried out from the home itself and generating income from the same can be classified as Household worker.

v **Other Working Population:** The Main Working Population involved in the other type of employment which are mentioned above.

### **Data collection:**

The data is collected from government website and the data features are modified for my convenient. (website:

<https://tn.data.gov.in/catalog/marginal-workers-classified-age-industrial-category-and-sex-census-2011-india-and-states.>)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	
1	District Co	Area Nam	Rural	Urb	Age_group	Work_Mo	Work_Mo	Work_Mo	Work_Mo	Work_Les	Work_Les	Work_Les	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial
2	'000	State - TAI Total	Total			66695	32578	34117	12153	5414	6739	6765	3551	3214	47551	21341	26210	5952	3448	2504	418	230	188	1868
3	'000	State - TAI Total	'5-14			2637	1345	1292	356	184	172	223	120	103	1212	601	611	134	76	58	4	2	2	46
4	'000	State - TAI Total	15-34			31370	15374	15996	5714	2511	3203	3068	1531	1537	21540	9554	11986	2674	1512	1162	238	124	114	922
5	'000	State - TAI Total	35-59			27418	12976	14442	4757	2072	2685	2849	1511	1338	20496	8965	11531	2652	1564	1088	152	88	64	738
6	'000	State - TAI Total	60+			5219	2865	2354	1320	647	673	624	389	235	4281	2213	2068	490	296	194	24	16	8	158
7	'000	State - TAI Total	Age not st			51	18	33	6	0	6	1	0	1	22	8	14	2	0	2	0	0	0	4
8	'000	State - TAI Rural	Total			59105	28342	30763	10306	4536	5770	6639	3497	3142	44750	19879	24871	4724	2706	2018	396	216	180	1580
9	'000	State - TAI Rural	'5-14			2251	1147	1104	334	173	161	214	115	99	1163	571	592	122	70	52	4	2	2	42
10	'000	State - TAI Rural	15-34			27755	13306	14449	4817	2085	2732	3004	1505	1499	20322	8928	11394	2084	1146	938	230	120	110	804
11	'000	State - TAI Rural	35-59			24371	11335	13036	3995	1734	2261	2803	1491	1312	19203	8306	10897	2106	1246	860	138	78	60	606
12	'000	State - TAI Rural	60+			4687	2539	2148	1154	544	610	617	386	231	4042	2067	1975	410	244	166	24	16	8	124
13	'000	State - TAI Rural	Age not st			41	15	26	6	0	6	1	0	1	20	7	13	2	0	2	0	0	0	4
14	'000	State - TAI Urban	Total			7590	4236	3354	1847	878	969	126	54	72	2801	1462	1339	1228	742	486	22	14	8	288
15	'000	State - TAI Urban	'5-14			386	198	188	22	11	11	9	5	4	49	30	19	12	6	6	0	0	0	4
16	'000	State - TAI Urban	15-34			3615	2068	1547	897	426	471	64	26	38	1218	626	592	590	366	224	8	4	4	118
17	'000	State - TAI Urban	35-59			3047	1641	1406	762	338	424	46	20	26	1293	659	634	546	318	228	14	10	4	132
18	'000	State - TAI Urban	60+			532	326	206	166	103	63	7	3	4	239	146	93	80	52	28	0	0	0	34
19	'000	State - TAI Urban	Age not st			10	3	7	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0
20	'602	District - T Total	Total			5408	2845	2563	1366	647	719	170	89	81	3868	1849	2019	600	400	200	6	4	2	136
21	'602	District - T Total	'5-14			230	125	105	41	21	20	24	13	11	87	45	42	14	8	6	0	0	0	2
22	'602	District - T Total	15-34			2538	1340	1198	636	284	352	64	29	35	1722	797	925	256	162	94	2	2	0	66
23	'602	District - T Total	35-59			2270	1166	1104	556	263	293	67	35	32	1743	828	915	280	192	88	4	2	2	56
24	'602	District - T Total	60+			365	214	151	131	79	52	15	12	3	315	179	136	48	38	10	0	0	0	12
25	'602	District - T Total	Age not st			5	0	5	2	0	2	0	0	0	1	0	1	2	0	2	0	0	0	0
26	'602	District - T Rural	Total			4532	2344	2188	1226	565	661	165	88	77	3629	1719	1910	428	296	132	4	2	2	96
27	'602	District - T Rural	'5-14			189	97	92	39	19	20	22	12	10	76	38	38	10	6	4	0	0	0	0
28	'602	District - T Rural	15-34			2463	1288	1204	671	317	374	67	30	33	1611	744	873	263	170	63	2	2	0	40

## Program:

The program visualize the data form the given dataset. the visualization shows the relationship between the Area Code and number of workers worked in Tamil Nadu.

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

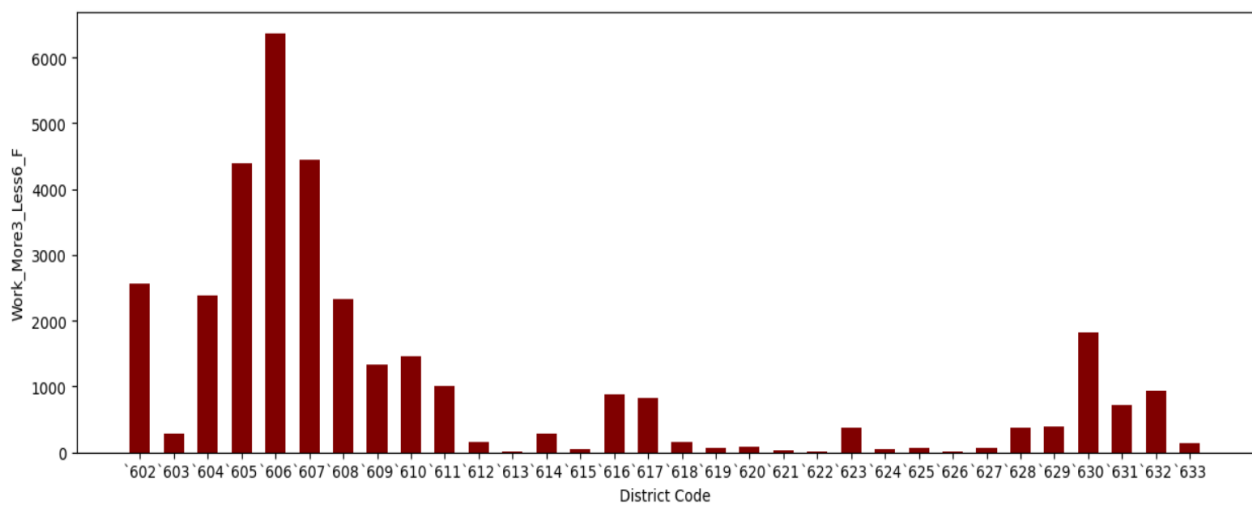
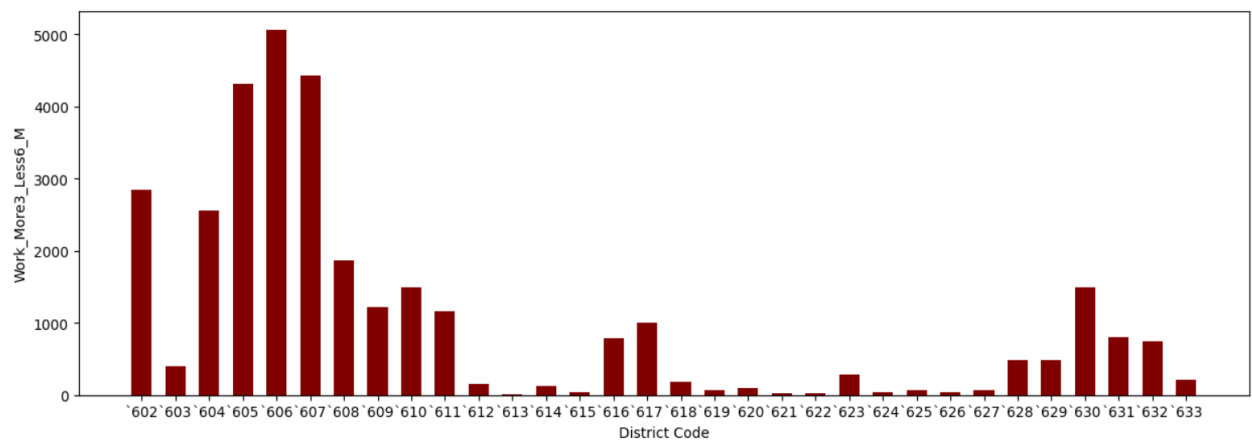
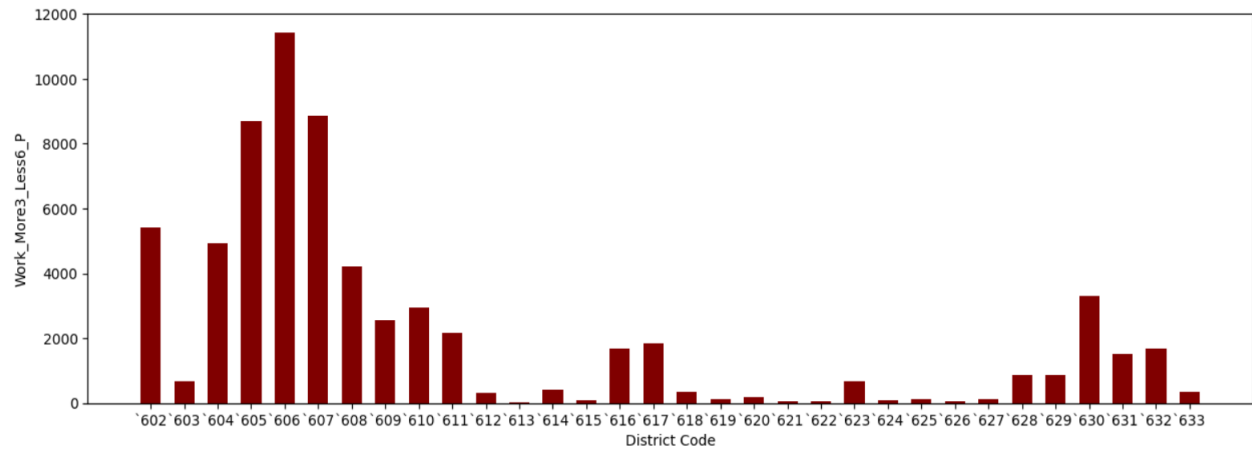
#Data collection and cleaning

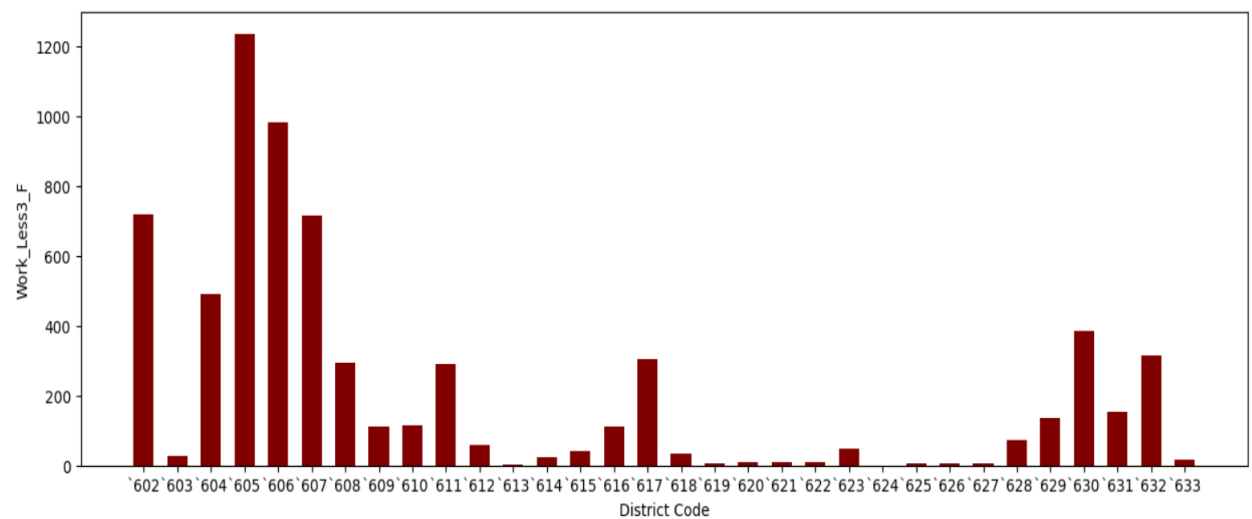
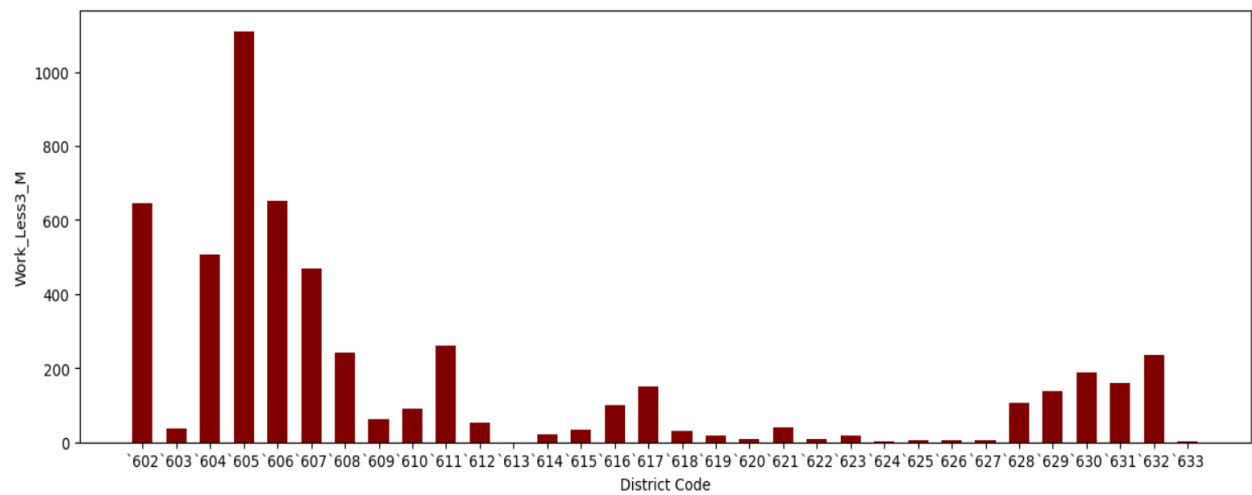
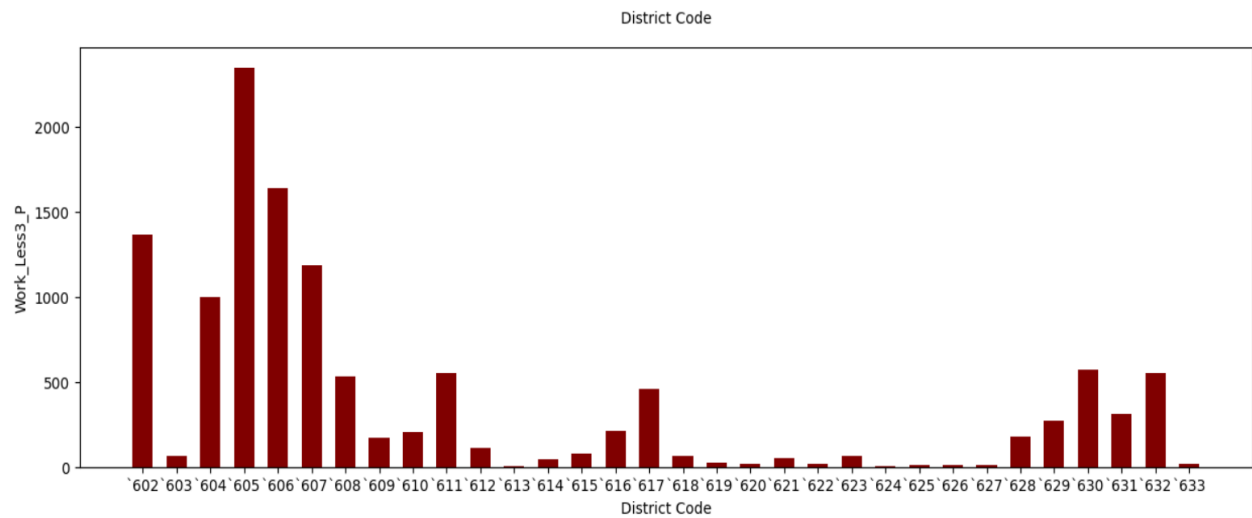
df=pd.read_csv("/content/drive/MyDrive/Marginal_worker1.csv")
df=df[df["District Code"]!="`000"]
df=df.reset_index(drop=True)
tot_condition=df["Age_group"]=="Total"
Total_people=df[tot_condition]
con1=df["Rural_Urban"]=="Total"
con2=df["Age_group"]=="Total"
district_tot=Total_people[con1==con2]

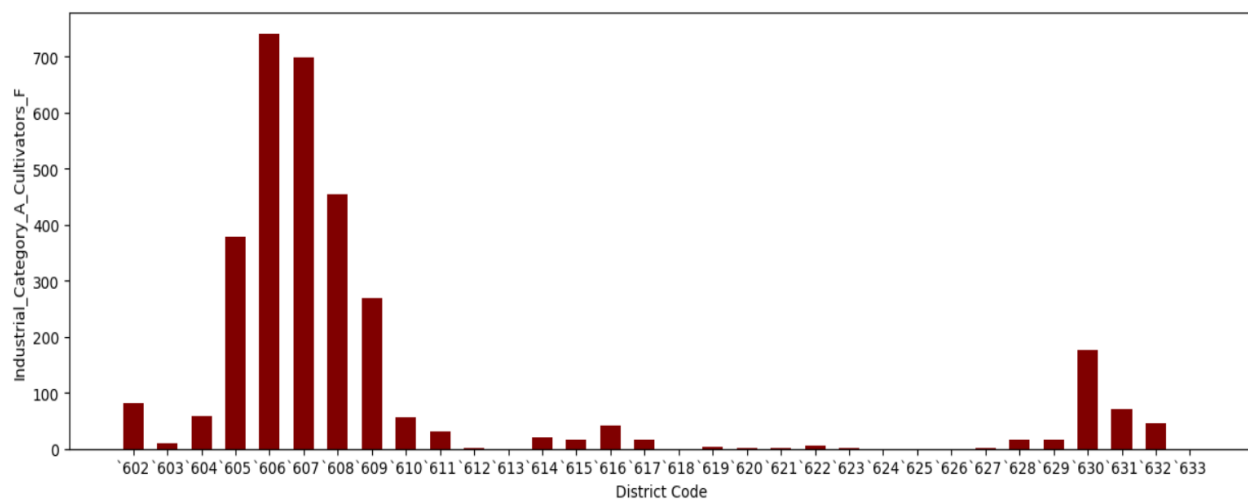
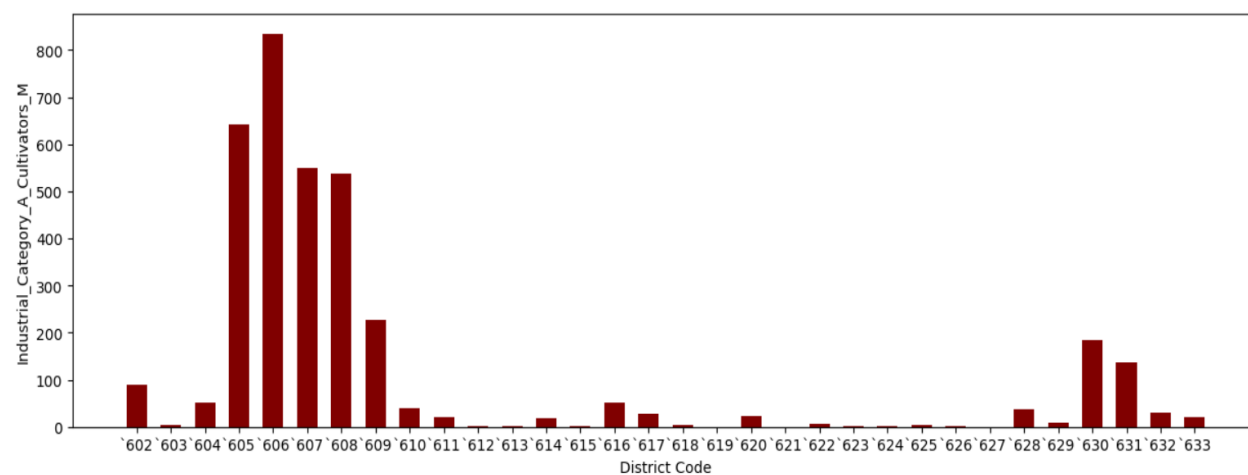
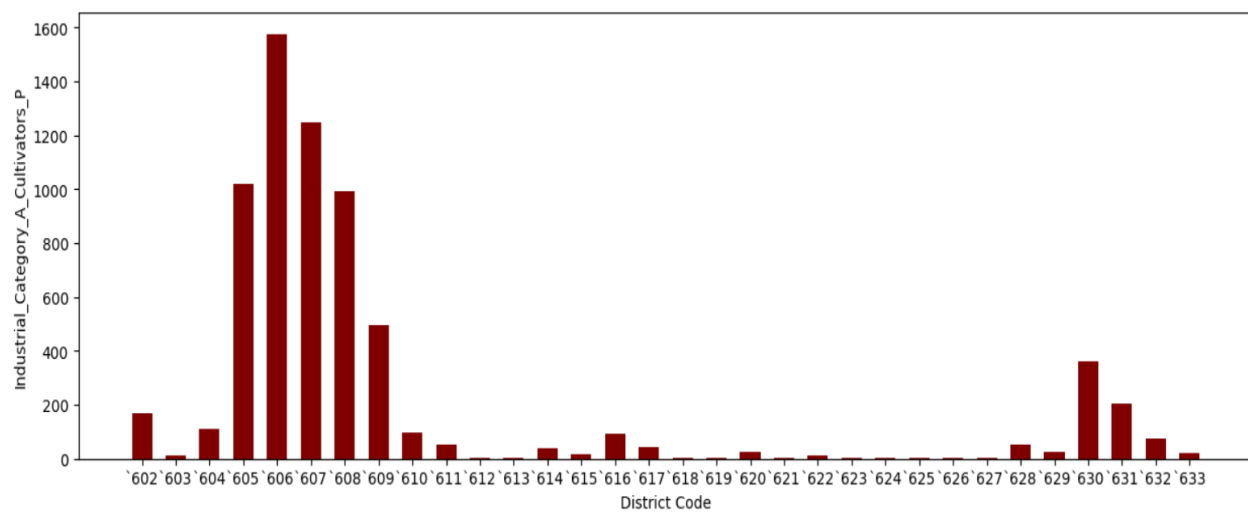
#Data Visualization
cols=list(df.columns)
cols.remove("District Code")
cols.remove("Area Name")
cols.remove("Rural_Urban")
cols.remove("Age_group")
cols
for i in cols:
    plt.figure().set_figwidth(15)
    plt.bar(df["District Code"], df[i], color='maroon', width = 0.6)
    plt.xlabel("District Code")
    plt.ylabel(i)
    plt.show()
```

Output:

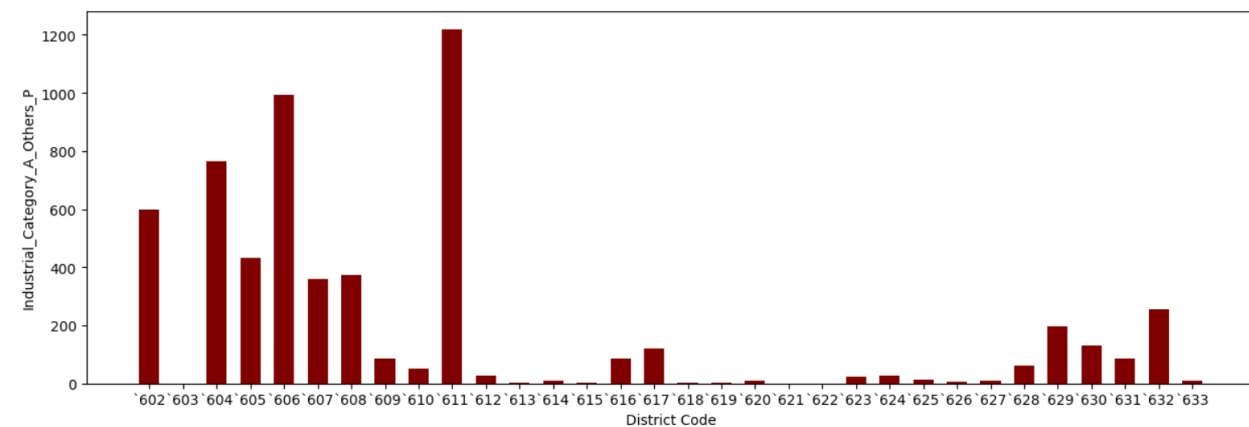
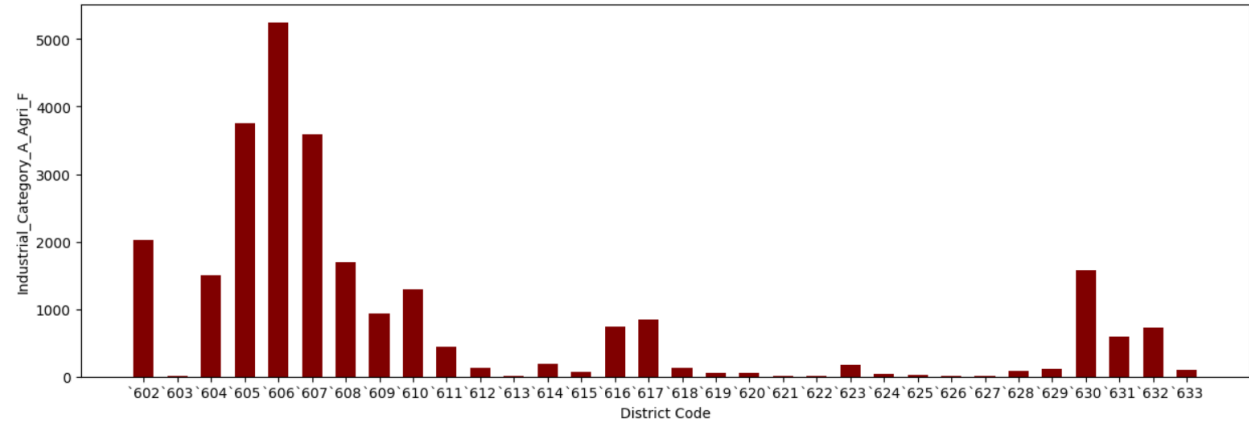
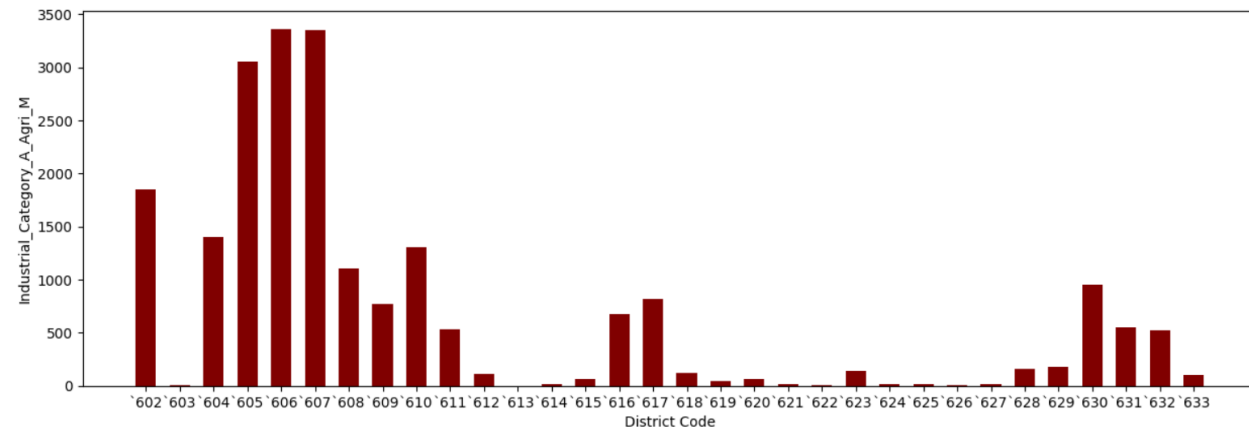
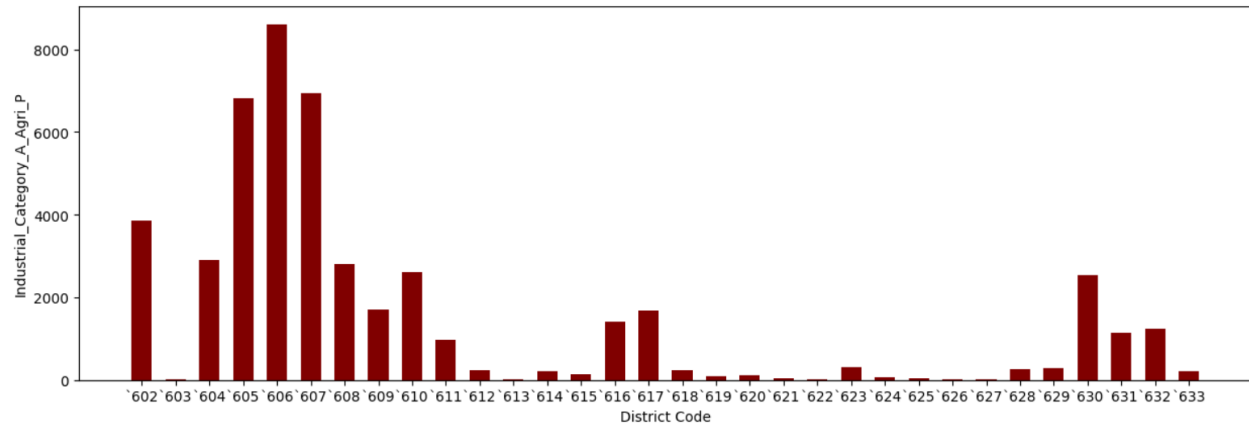
The output shows in Bar chart.

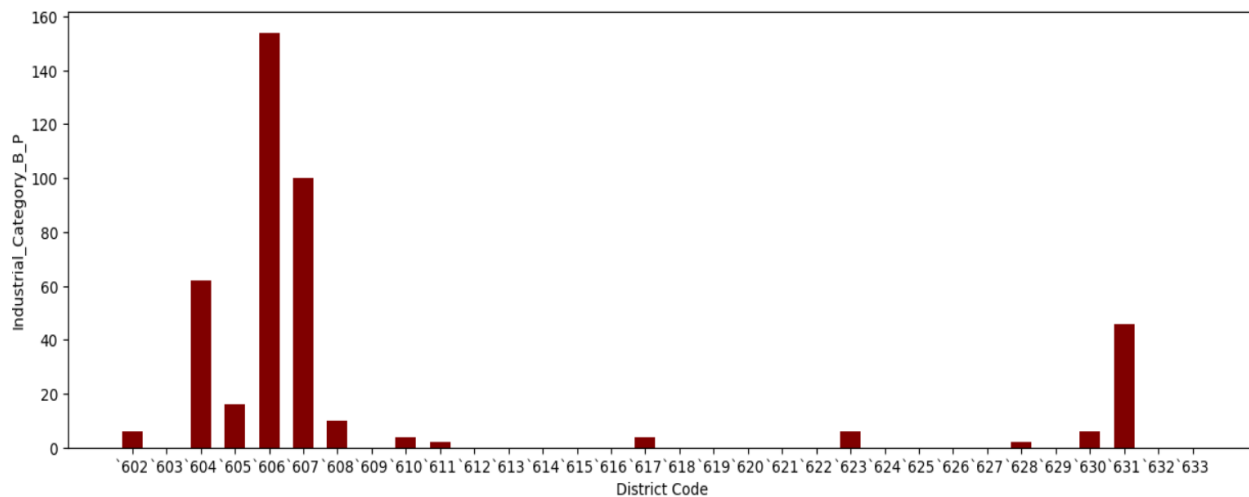
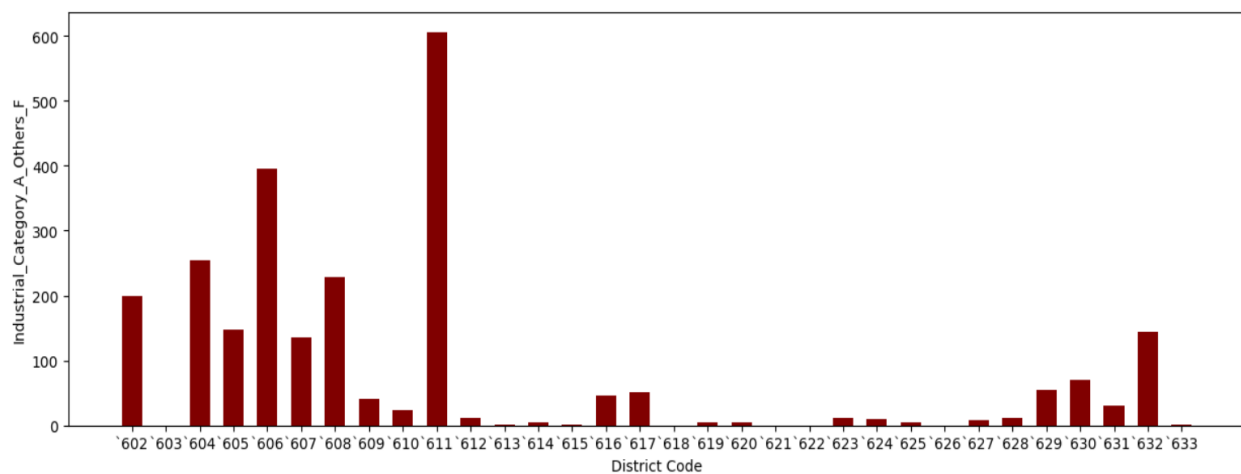
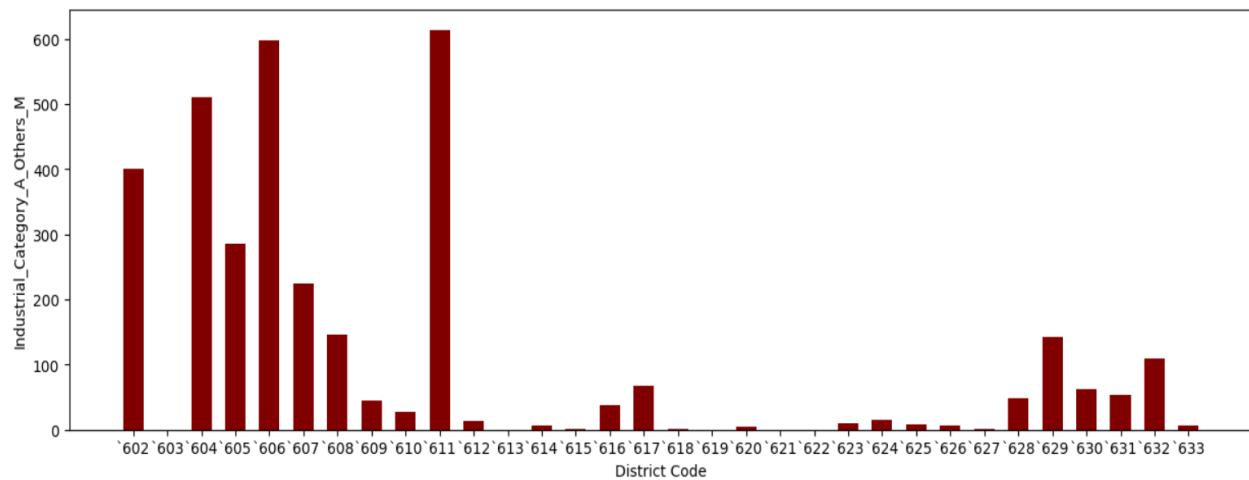


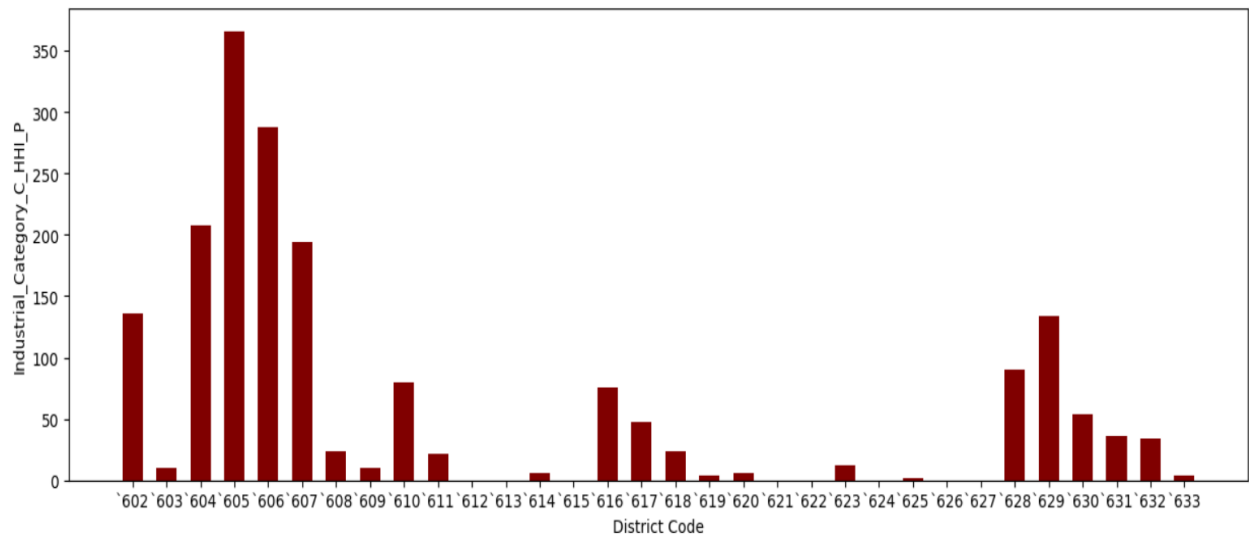
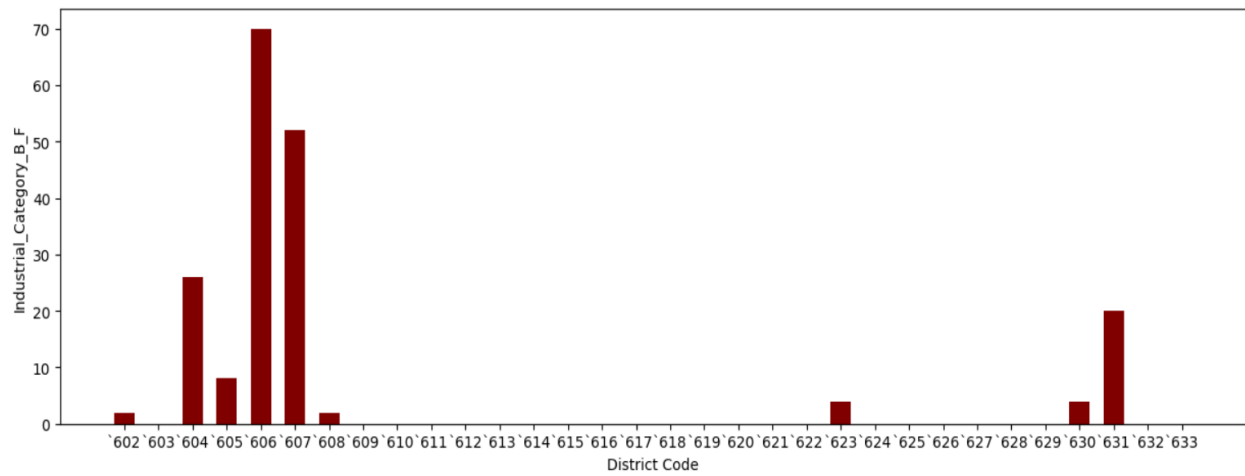
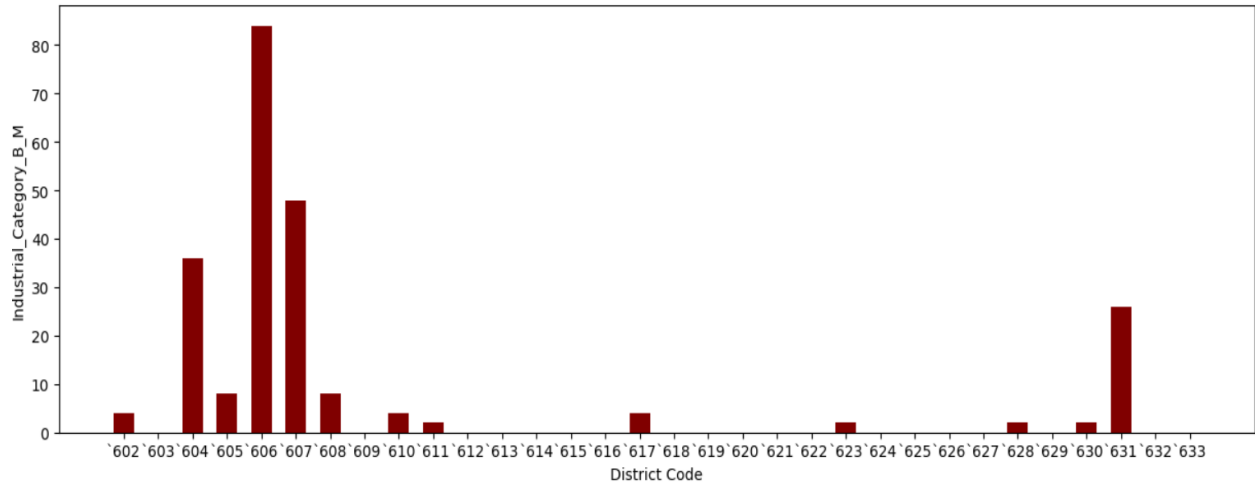


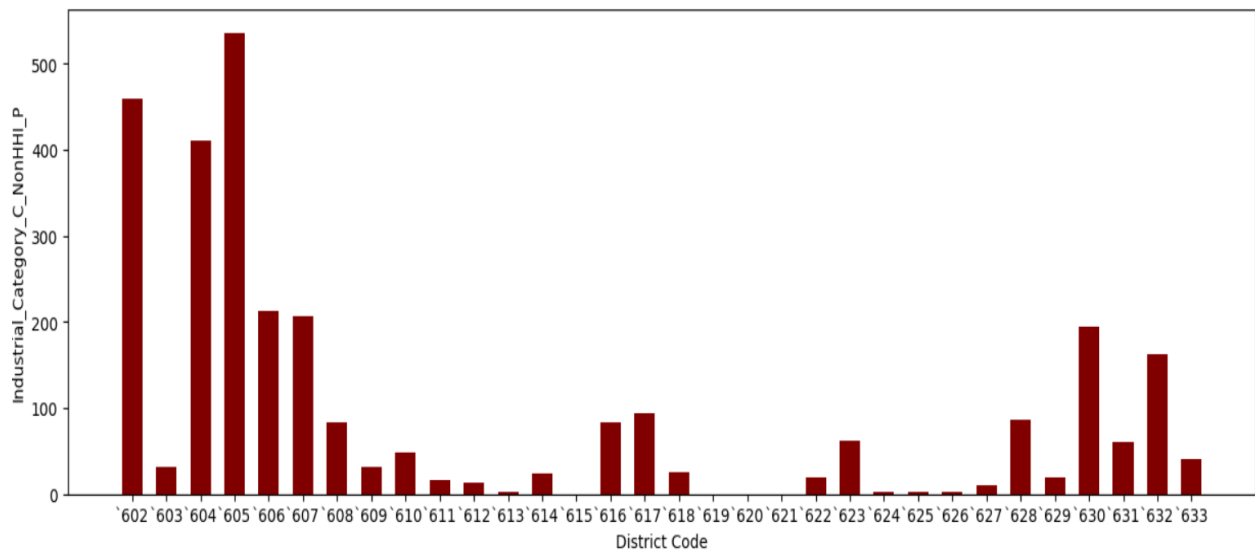
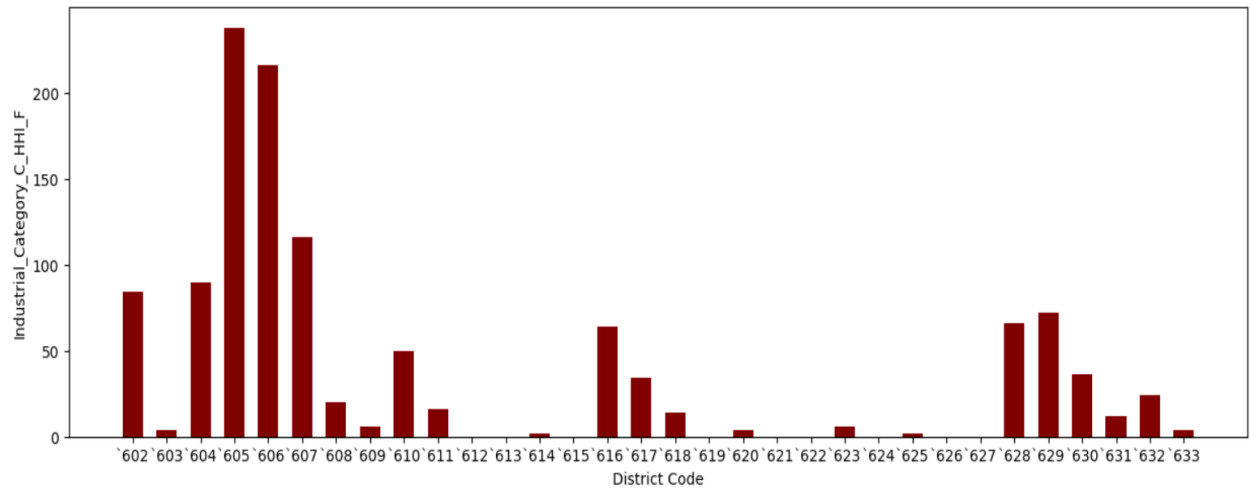
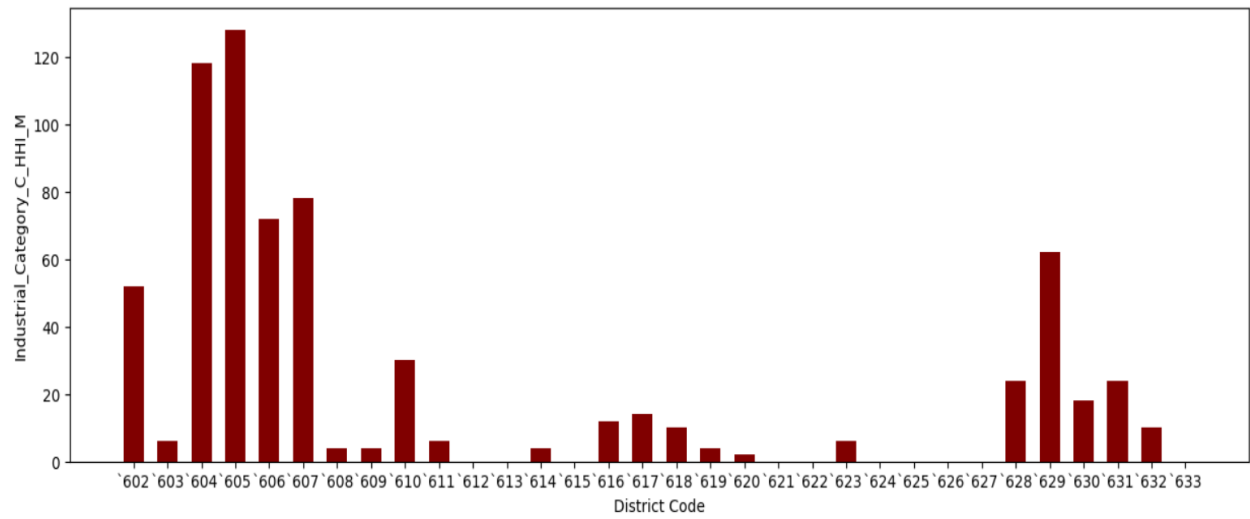


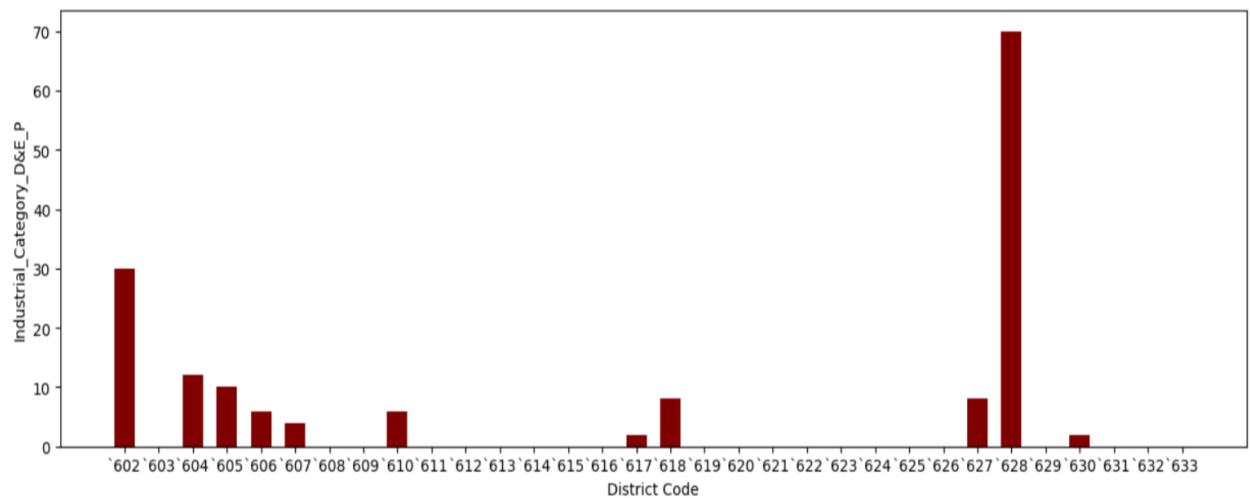
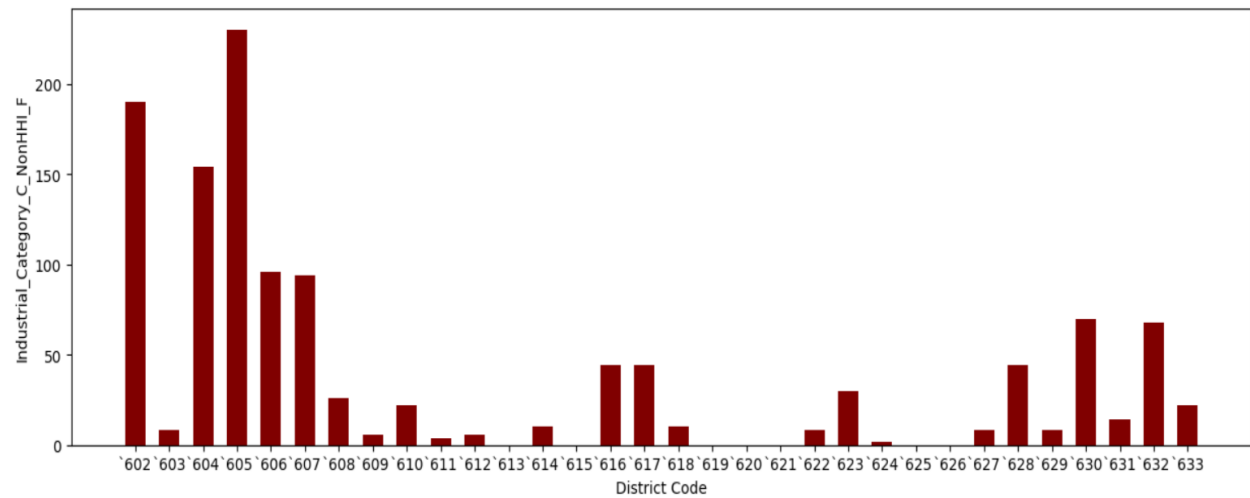
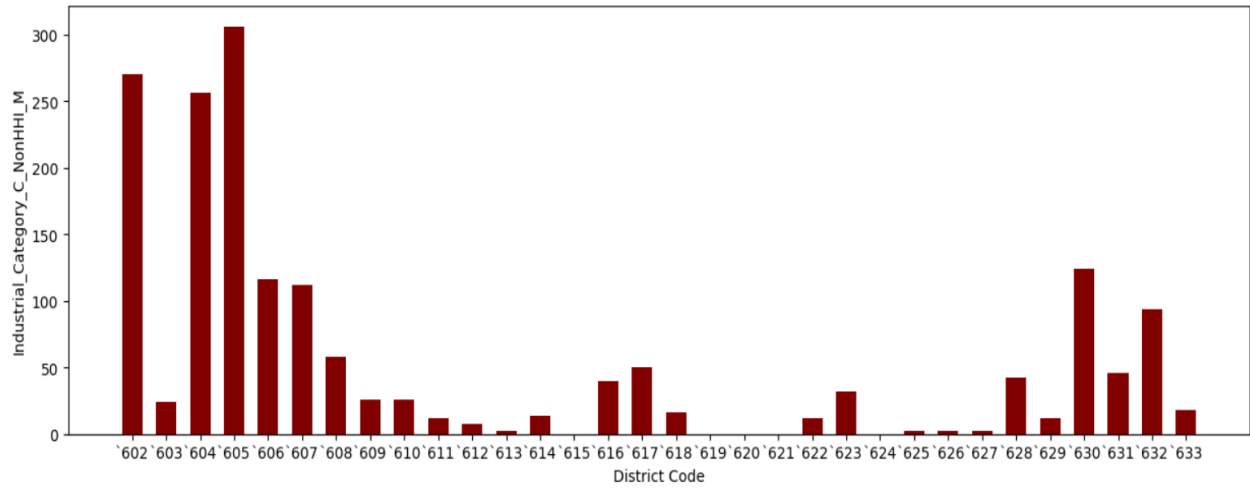


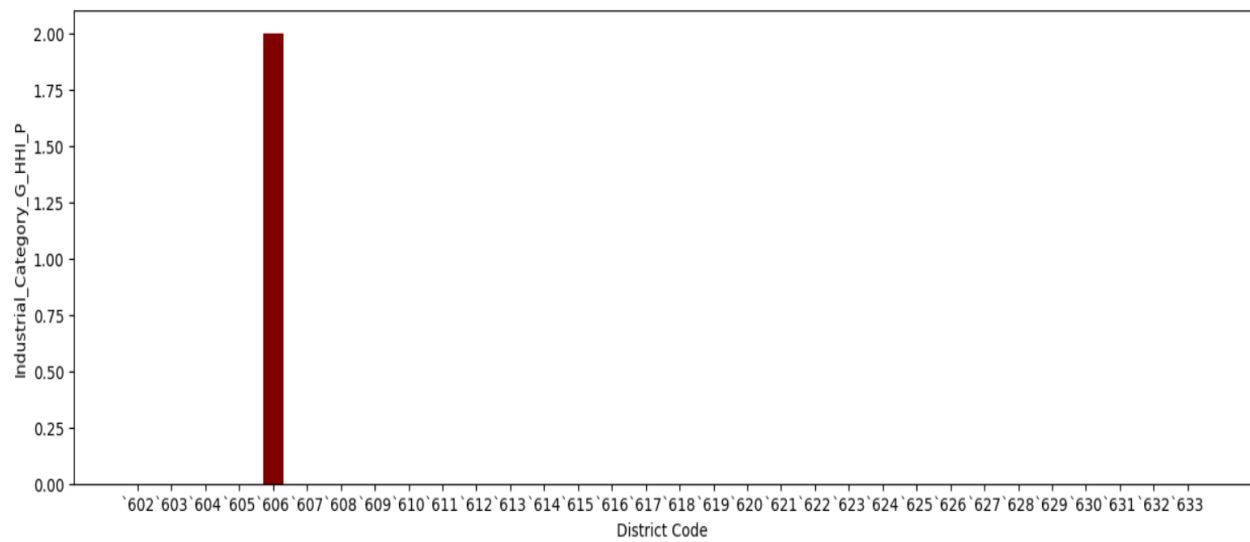
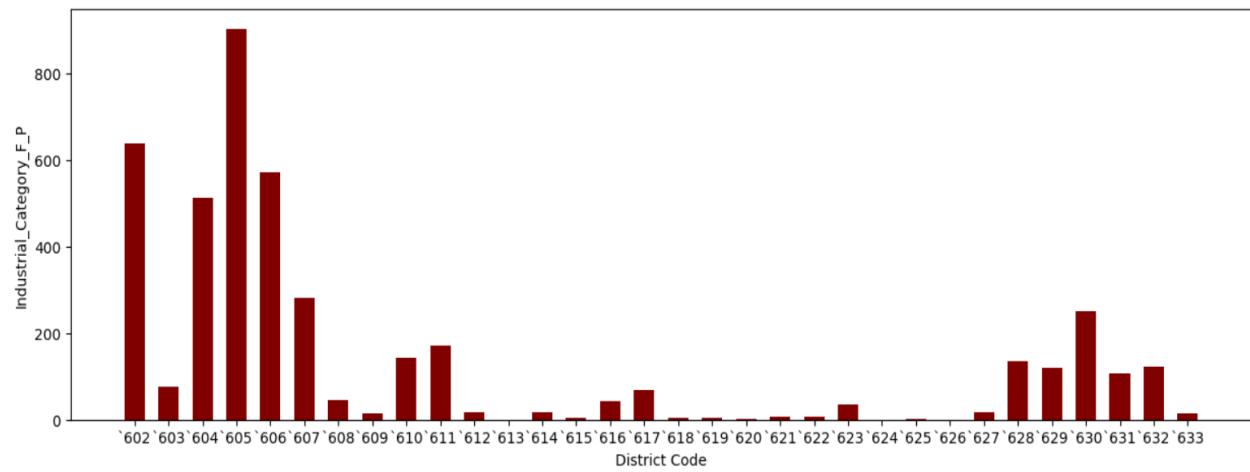
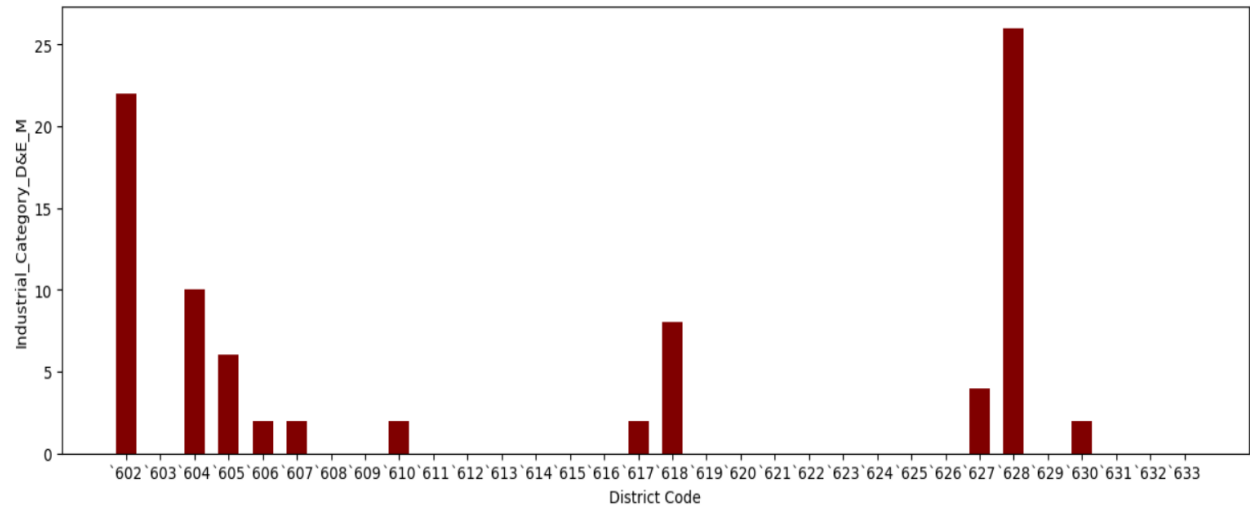


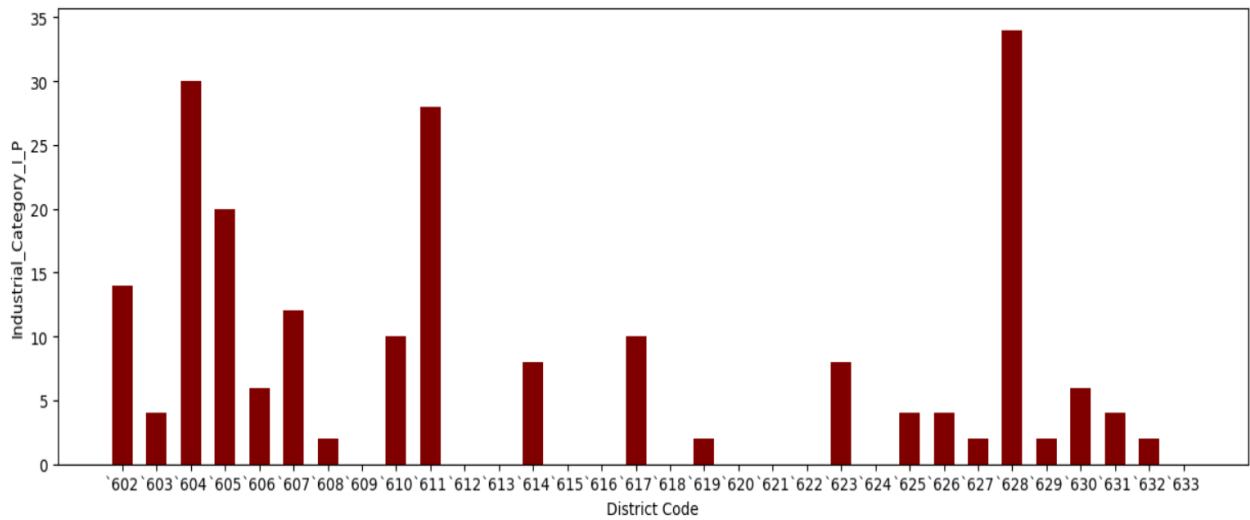
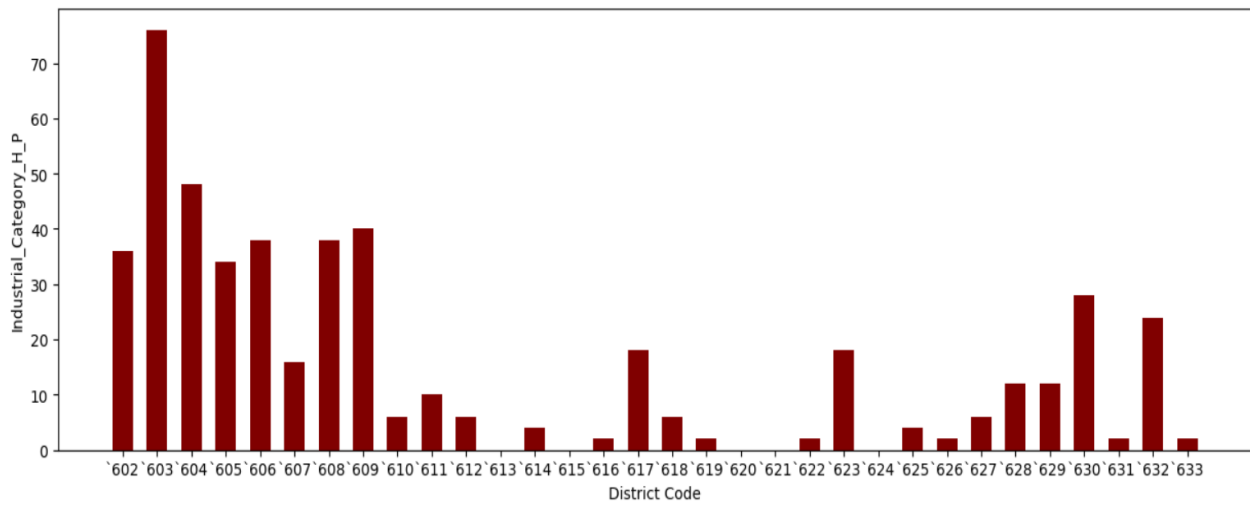
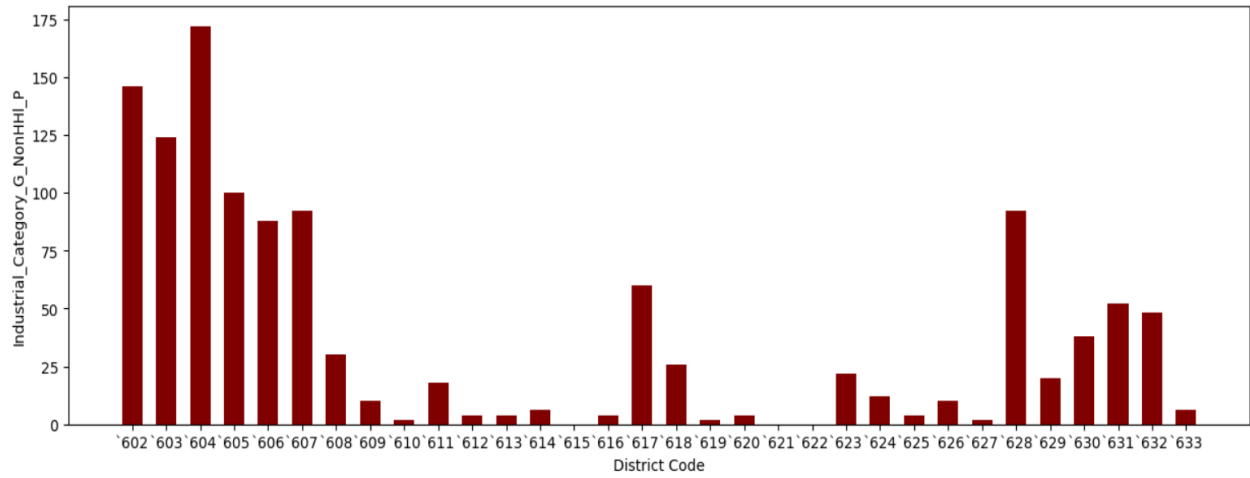


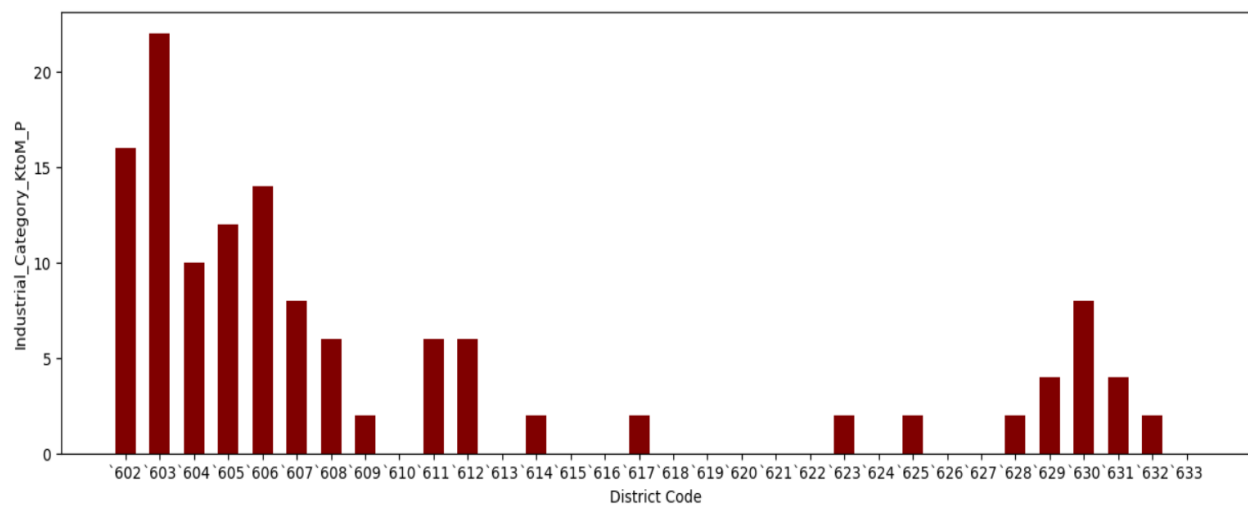
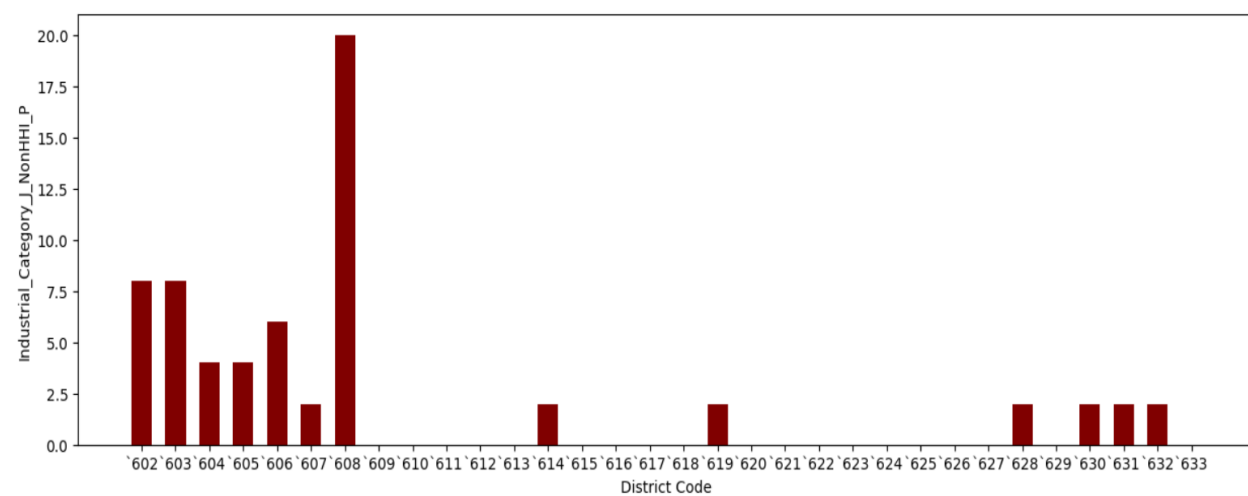
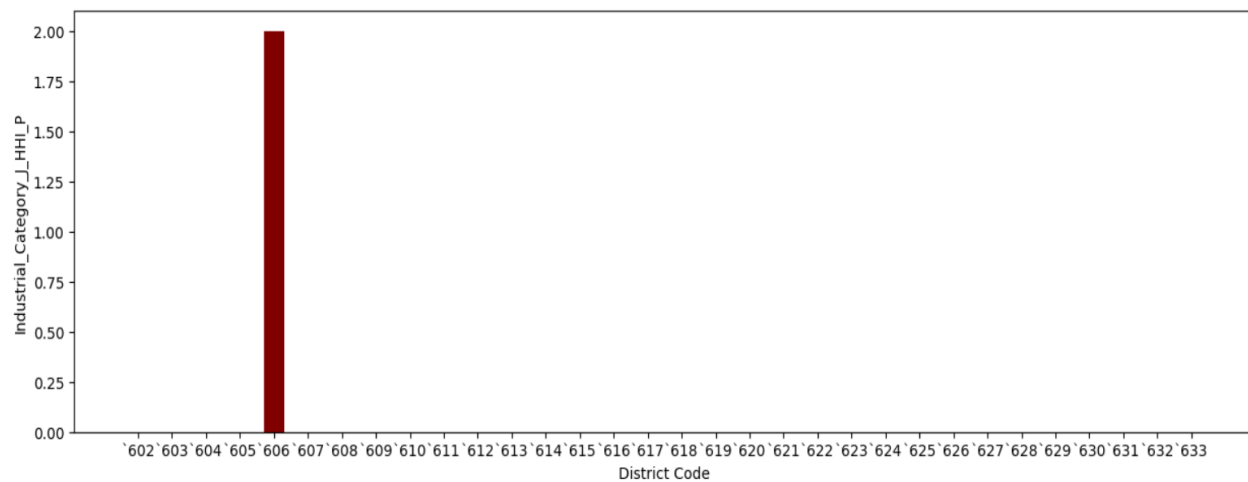




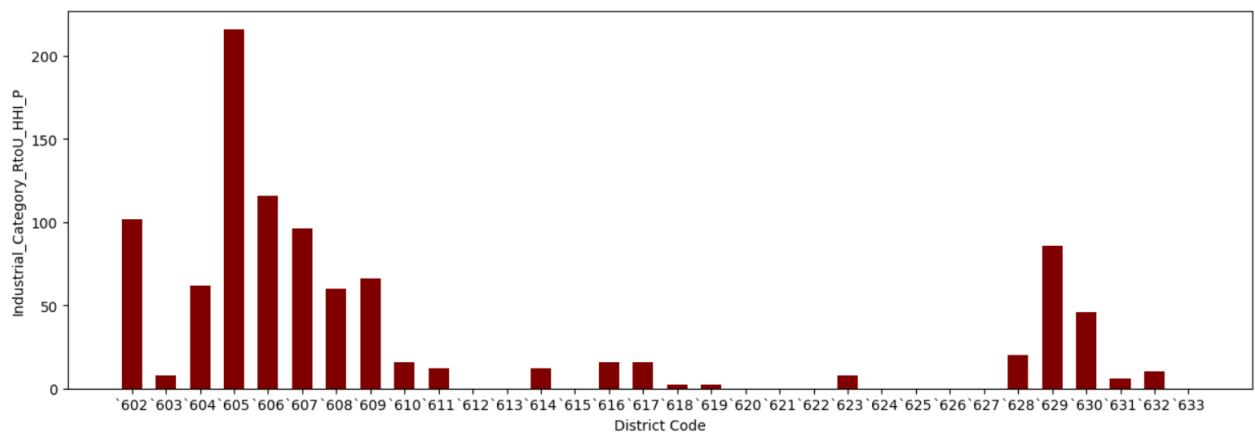
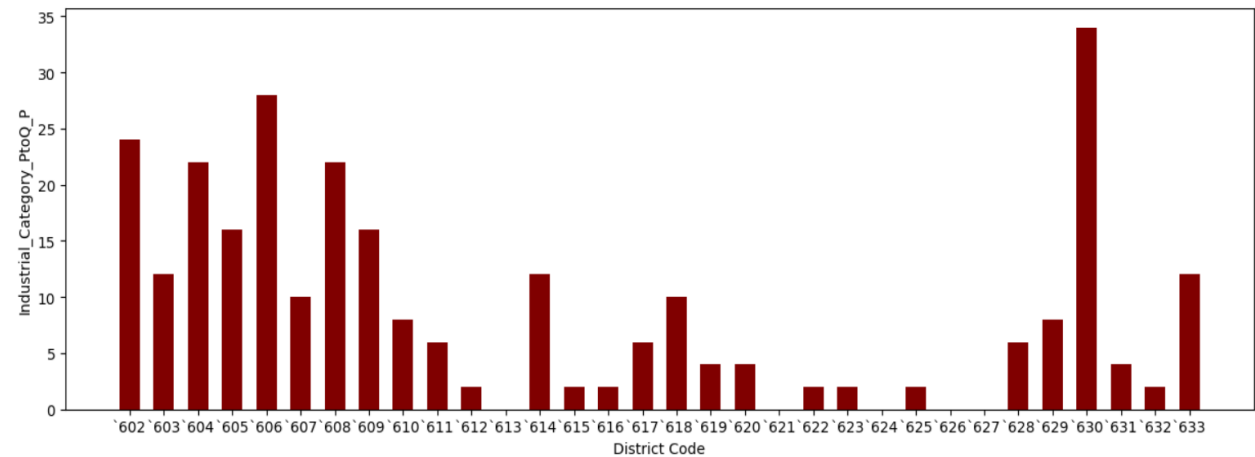
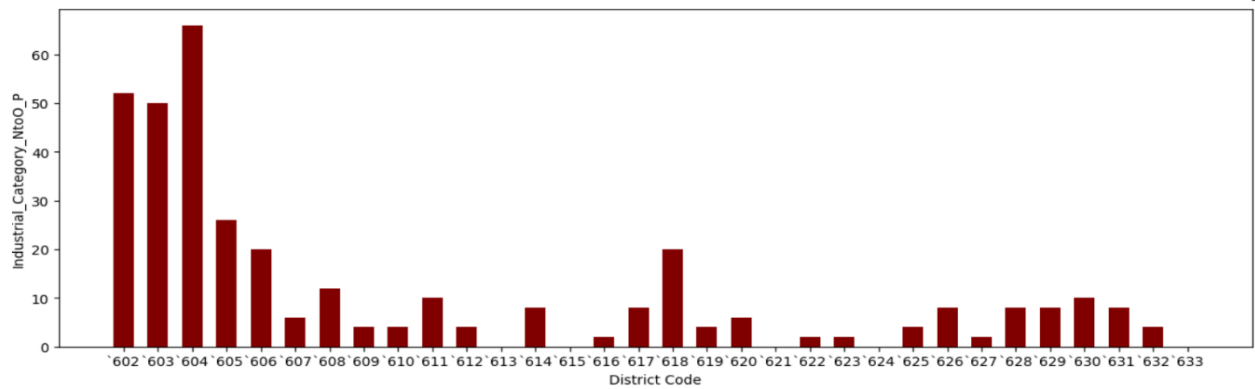
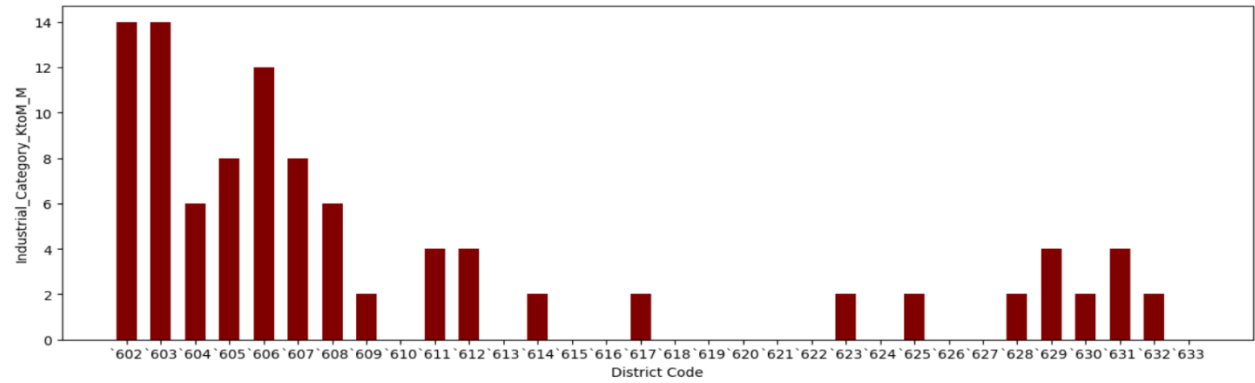


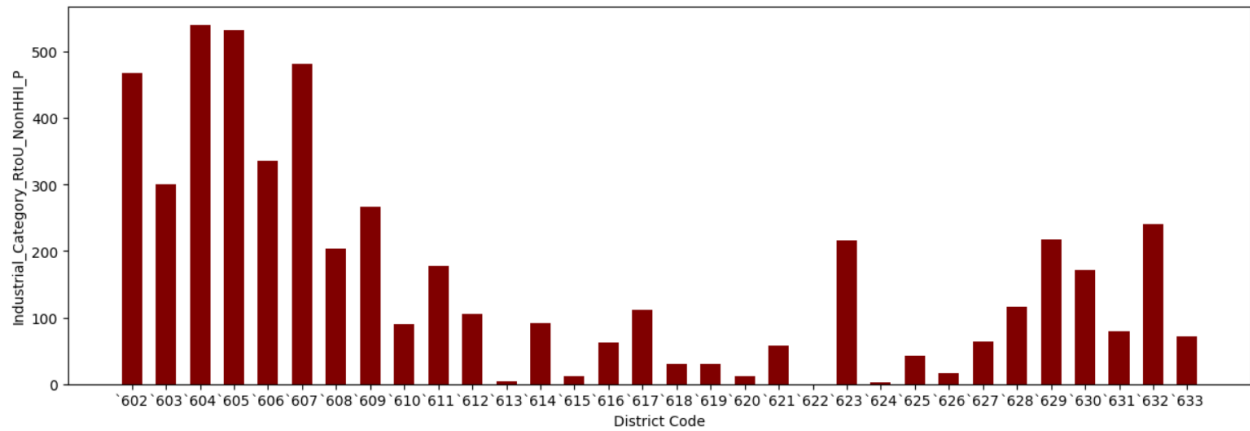












## Conclusion:

The major marginal workers worked in following Area code in Tamil Nadu 602,603,604,605,607,608 and 610.industry category D&E major persons are worked in 629.