

✓ Mapping the Evolution of Cybercrime Across Indian States and Union Territories:

An Analysis of Cyber Threats in the COVID Era

✓ Installing and Importing the Libraries

```
pip install tabula-py
```

```
Collecting tabula-py
  Downloading tabula_py-2.8.2-py3-none-any.whl (12.0 MB) 12.0/12.0 MB 61.8 MB/s eta 0:00:00
Requirement already satisfied: pandas>=0.25.3 in /usr/local/lib/python3.10/dist-packages (from tabula-py) (1.5.3)
Requirement already satisfied: numpy in /usr/local/lib/python3.10/dist-packages (from tabula-py) (1.23.5)
Requirement already satisfied: distro in /usr/lib/python3/dist-packages (from tabula-py) (1.7.0)
Collecting jppye1 (from tabula-py)
  Downloading JPPye1-1.4.1-cp310-cp310-manylinux_2_12_x86_64.manylinux2010_x86_64.whl (465 kB) 465.3/465.3 kB 35.7 MB/s eta 0:00:00
Requirement already satisfied: python-dateutil>=2.8.1 in /usr/local/lib/python3.10/dist-packages (from pandas>=0.25.3->tabula-py)
Requirement already satisfied: pytz>=2020.1 in /usr/local/lib/python3.10/dist-packages (from pandas>=0.25.3->tabula-py) (2023.1)
Requirement already satisfied: packaging in /usr/local/lib/python3.10/dist-packages (from jppye1->tabula-py) (23.2)
Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.10/dist-packages (from python-dateutil>=2.8.1->pandas>=1.5.3)
Installing collected packages: jppye1, tabula-py
Successfully installed jppye1-1.4.1 tabula-py-2.8.2
```

```
pip install PyPDF2
```

```
Collecting PyPDF2
  Downloading pypdf2-3.0.1-py3-none-any.whl (232 kB) 232.6/232.6 kB 4.7 MB/s eta 0:00:00
Installing collected packages: PyPDF2
Successfully installed PyPDF2-3.0.1
```

✓ Scrapping the data from PDF

```
import tabula
import PyPDF2
import pandas as pd

# Function to extract text from a PDF
def extract_text_from_pdf(pdf_path):
    text = ""
    with open(pdf_path, 'rb') as pdf_file:
        pdf_reader = PyPDF2.PdfReader(pdf_file)
        for page_num in range(len(pdf_reader.pages)):
            page = pdf_reader.pages[page_num]
            text += page.extract_text()
    return text

# Function to extract tables from a PDF in the specified page range
def extract_tables_from_pdf(pdf_path, start_page, end_page):
    pdf_text = extract_text_from_pdf(pdf_path)
    tables = tabula.read_pdf(pdf_path, pages=f'{start_page}-{end_page}', multiple_tables=True)
    return tables

# PDF file path
pdf_path = "Cyber.pdf"
# Page range to extract tables from
start_page = 332
end_page = 342

# Extract tables from the specified page range
tables = extract_tables_from_pdf(pdf_path, start_page, end_page)

# Convert the tables to Pandas DataFrames
dataframes = [pd.DataFrame(table) for table in tables]

# You can now access and work with the extracted tables as DataFrames, for example:
# dataframes[0] is the first table, dataframes[1] is the second table, and so on.

# Example: Display the first table
dataframes[0]
```

	Unnamed: 0	Unnamed: 1	Unnamed: 2	Unnamed: 3	A. Offences under I.T.Act	Unnamed: 4
0	NaN	NaN	NaN	NaN	Computer Related Offences	NaN
1	NaN	NaN	Tampering	NaN		NaN
2	S.	NaN	NaN	NaN		NaN
3	State/UT No	NaN	computer	NaN	A) Computer Related B) Dishonestly	NaN
4	NaN	NaN	source	Computer	Computer Offences (Sec.66) receiving stolen	NaN
5	NaN	NaN	documents	Related	a2) Related computer	C) Identity
6	NaN	NaN	(Sec.65)	Offences	a1) Offences resource or	Theft
7	NaN	NaN	NaN	NaN	Ransom- other than	(Sec.66C)
8	NaN	NaN	NaN	(Total)	(Sec.66) communication	NaN
9	NaN	NaN	NaN	NaN	ware Ransom-	NaN
10	NaN	NaN	NaN	NaN	(Total) device (Sec.66B)	NaN
11	NaN	NaN	NaN	NaN	ware	NaN
12	1 2	NaN	3	4	5 6 7 8	9
13	STATES:	NaN	NaN	NaN		NaN
14	1 Andhra Pradesh	NaN	7	264	4 1 3 29	97
15	2 Arunachal Pradesh	NaN	0	1	0 0 0 0	1
16	3 Assam	NaN	5	1113	191 0 191 16	136
17	4 Bihar	NaN	0	24	0 0 0 0	15
18	5 Chhattisgarh	NaN	0	19	5 0 5 1	4
19	6 Goa	NaN	1	0	0 0 0 0	0
20	7 Gujarat	NaN	4	206	3 1 2 6	175
21	8 Haryana	NaN	2	195	39 0 39 11	29
22	9 Himachal Pradesh	NaN	0	25	2 1 1 1	8
23	10 Jammu & Kashmir	NaN	0	22	3 0 3 0	8
24	11 Jharkhand	NaN	0	1004	245 87 158 168	331
25	12 Karnataka	NaN	15	11700	134 15 119 28	10482
26	13 Kerala	NaN	1	90	13 1 12 6	21
27	14 Madhya Pradesh	NaN	0	277	17 12 5 1	71
28	15 Maharashtra	NaN	4	408	15 4 11 8	214
29	16 Manipur	NaN	0	1	0 0 0 0	0
30	17 Meghalaya	NaN	0	72	1 0 1 0	27
31	18 Mizoram	NaN	0	5	0 0 0 0	3
32	19 Nagaland	NaN	0	2	0 0 0 0	1
33	20 Odisha	NaN	1	3	0 0 0 0	0
34	21 Punjab	NaN	1	25	1 0 1 2	10
35	22 Rajasthan	NaN	8	540	24 4 20 16	207
36	23 Sikkim	NaN	0	0	0 0 0 0	0
37	24 Tamil Nadu	NaN	3	95	30 12 18 1	22
38	25 Telangana	NaN	1	1486	6 3 3 0	33
39	26 Tripura	NaN	0	9	1 0 1 0	3
40	27 Uttar Pradesh	NaN	119	5853	3683 881 2802 255	307
41	28 Uttarakhand	NaN	0	64	17 1 16 0	10
42	29 West Bengal	NaN	1	64	28 0 28 1	26
43	TOTAL STATE(S)	NaN	173	23567	4462 1023 3439 550	12241
44	UNION TERRITORIES:	NaN	NaN	NaN		NaN
45	30 A&N Islands	NaN	0	0	0 0 0 0	0
46	31 Chandigarh	NaN	0	4	1 0 1 0	2
47	32 D&N Haveli	NaN	0	0	0 0 0 0	0
48	33 Daman & Diu	NaN	0	1	0 0 0 0	0

49	34 Delhi	NaN	0	37	4 0 4 8	11
50	35 Lakshadweep	NaN	0	1	0 0 0 0	1
51	36 Puducherry	NaN	0	2	0 0 0 0	0
52	TOTAL UT(S)	NaN	0	45	5 0 5 8	14

Dataframe of a page

```
dataframes[0]
```

	Unnamed: 0	Unnamed: 1	Unnamed: 2	Unnamed: 3	A. Offences under I.T.Act	Unnamed: 4
0	NaN	NaN	NaN	NaN	Computer Related Offences	NaN
1	NaN	NaN	Tampering	NaN	NaN	NaN
2	S.	NaN	NaN	NaN	NaN	NaN
3	State/UT No	NaN	computer	NaN	A) Computer Related B) Dishonestly	NaN
4	NaN	NaN	source	Computer	Computer Offences (Sec.66) receiving stolen	NaN
5	NaN	NaN	documents	Related	a2) Related computer	C) Identity
6	NaN	NaN	(Sec.65)	Offences	a1) Offences	resource or Theft
7	NaN	NaN	NaN	NaN	Ransom- other than	(Sec.66C)
8	NaN	NaN	NaN	(Total)	(Sec.66) communication	NaN
9	NaN	NaN	NaN	NaN	ware Ransom-	NaN
10	NaN	NaN	NaN	NaN	(Total) device (Sec.66B)	NaN
11	NaN	NaN	NaN	NaN	ware	NaN

▼ Data Cleaning

14 1 Andhra Pradesh NaN 7 264 41329 97

Dropping the columns

```
dataframes[0] = dataframes[0].drop(dataframes[0].index[0:14])  
...  
dataframes[0]
```

			Unnamed: 0	Unnamed: 1	Unnamed: 2	Unnamed: 3	A. Offences under I.T.Act	Unnamed: 4
14	1 Andhra Pradesh		NaN	7	264		41329	97
15	2 Arunachal Pradesh		NaN	0	1		0000	1
16	3 Assam		NaN	5	1113		191019116	136
17	4 Bihar		NaN	0	24		0000	15
18	5 Chhattisgarh		NaN	0	19		5051	4
19	6 Goa		NaN	1	0		0000	0
20	7 Gujarat		NaN	4	206		3126	175
21	8 Haryana		NaN	2	195		3903911	29
22	9 Himachal Pradesh		NaN	0	25		2111	8
23	10 Jammu & Kashmir		NaN	0	22		3030	8
24	11 Jharkhand		NaN	0	1004		24587158168	331

Splitting the column

```

# Split the 'A. Offences under I.T.Act' column based on spaces and create new columns in the first DataFrame (dataframes[0])
dataframes[0][['A') Computer Related Offences (Sec.66) (Total)', 'a1) Ransomware', 'a2) Offences other than Ransomware', 'B)
# Drop the original 'A. Offences under I.T.Act' column in the first DataFrame (dataframes[0])
dataframes[0] = dataframes[0].drop('A. Offences under I.T.Act', axis=1)

# Now, the first DataFrame (dataframes[0]) will have separate columns for each value
print(dataframes[0])

```

			Unnamed: 0	Unnamed: 1	Unnamed: 2	Unnamed: 3	Unnamed: 4	\
14	1 Andhra Pradesh		NaN	7	264		97	
15	2 Arunachal Pradesh		NaN	0	1		1	
16	3 Assam		NaN	5	1113		136	
17	4 Bihar		NaN	0	24		15	
18	5 Chhattisgarh		NaN	0	19		4	
19	6 Goa		NaN	1	0		0	
20	7 Gujarat		NaN	4	206		175	
21	8 Haryana		NaN	2	195		29	
22	9 Himachal Pradesh		NaN	0	25		8	
23	10 Jammu & Kashmir		NaN	0	22		8	
24	11 Jharkhand		NaN	0	1004		331	
25	12 Karnataka		NaN	15	11700		10482	
26	13 Kerala		NaN	1	90		21	
27	14 Madhya Pradesh		NaN	0	277		71	
28	15 Maharashtra		NaN	4	408		214	
29	16 Manipur		NaN	0	1		0	
30	17 Meghalaya		NaN	0	72		27	
31	18 Mizoram		NaN	0	5		3	
32	19 Nagaland		NaN	0	2		1	
33	20 Odisha		NaN	1	3		0	
34	21 Punjab		NaN	1	25		10	
35	22 Rajasthan		NaN	8	540		207	
36	23 Sikkim		NaN	0	0		0	
37	24 Tamil Nadu		NaN	3	95		22	
38	25 Telangana		NaN	1	1486		33	
39	26 Tripura		NaN	0	9		3	
40	27 Uttar Pradesh		NaN	119	5853		307	
41	28 Uttarakhand		NaN	0	64		10	
42	29 West Bengal		NaN	1	64		26	
43	TOTAL STATE(S)		NaN	173	23567		12241	
44	UNION TERRITORIES:		NaN	NaN	NaN		NaN	
45	30 A&N Islands		NaN	0	0		0	
46	31 Chandigarh		NaN	0	4		2	
47	32 D&N Haveli		NaN	0	0		0	
48	33 Daman & Diu		NaN	0	1		0	
49	34 Delhi		NaN	0	37		11	
50	35 Lakshadweep		NaN	0	1		1	
51	36 Puducherry		NaN	0	2		0	
52	TOTAL UT(S)		NaN	0	45		14	
53	TOTAL ALL INDIA		NaN	173	23612		12255	

			A) Computer Related Offences (Sec.66) (Total)	a1) Ransomware	\
14			4	1	
15			0	0	
16			191	0	
17			0	0	
18			5	0	
19			0	0	
20			3	1	
21			39	0	
22			2	1	
23			3	0	

24			245		87			
25			134		15			
26			13		1			
27			17		12			
28			15		4			

dataframes[0]

17	4 Bihar	NaN	0	24	15	0	0	0	0
18	5 Chhattisgarh	NaN	0	19	4	5	0	5	1
19	6 Goa	NaN	1	0	0	0	0	0	0
20	7 Gujarat	NaN	4	206	175	3	1	2	0
21	8 Haryana	NaN	2	195	29	39	0	39	11
22	9 Himachal Pradesh	NaN	0	25	8	2	1	1	1
23	10 Jammu & Kashmir	NaN	0	22	8	3	0	3	0
24	11 Jharkhand	NaN	0	1004	331	245	87	158	168
25	12 Karnataka	NaN	15	11700	10482	134	15	119	28
26	13 Kerala	NaN	1	90	21	13	1	12	6
27	14 Madhya Pradesh	NaN	0	277	71	17	12	5	1
28	15 Maharashtra	NaN	4	408	214	15	4	11	8
29	16 Manipur	NaN	0	1	0	0	0	0	0
30	17 Meghalaya	NaN	0	72	27	1	0	1	0
31	18 Mizoram	NaN	0	5	3	0	0	0	0
32	19 Nagaland	NaN	0	2	1	0	0	0	0
33	20 Odisha	NaN	1	3	0	0	0	0	0
34	21 Punjab	NaN	1	25	10	1	0	1	2
35	22 Rajasthan	NaN	8	540	207	24	4	20	16
36	23 Sikkim	NaN	0	0	0	0	0	0	0
37	24 Tamil Nadu	NaN	3	95	22	30	12	18	1
38	25 Telangana	NaN	1	1486	33	6	3	3	0
39	26 Tripura	NaN	0	9	3	1	0	1	0
40	27 Uttar Pradesh	NaN	119	5853	307	3683	881	2802	255
41	28 Uttarakhand	NaN	0	64	10	17	1	16	0
42	29 West Bengal	NaN	1	64	26	28	0	28	1
43	TOTAL STATE(S)	NaN	173	23567	12241	4462	1023	3439	550
44	UNION TERRITORIES:	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
45	30 A&N Islands	NaN	0	0	0	0	0	0	0
46	31 Chandigarh	NaN	0	4	2	1	0	1	0
47	32 D&N Haveli	NaN	0	0	0	0	0	0	0
--	33 Daman &	---	---	---	---	---	---	---	---

Renaming the columns

```
dataframes[0].rename(columns={  
    'Unnamed: 0': 'State/UT',  
    'Unnamed: 2': 'Tampering computer source documents (Sec.65)',  
    'Unnamed: 3': 'Computer Related Offences (Total)',  
    'Unnamed: 4': 'C) IdentityTheft(Sec.66C)'  
}, inplace=True)
```

```
dataframes[0]
```

		Tampering	Computer		A)		B)
State/UT	Unnamed:	computer	Related	C)	Computer	a2)	Dishonestly receiving
		source	Offences	IdentityTheft(Sec.66C)	Offences	Ransomware	stolen computer
1		documents	(Total)		(Sec.66)	other than	resource or
		(Sec.65)			(Total)	Ransomware	communication device

Dropping a row

```
# Find the row index that contains the specified data
row_index_to_remove = dataframes[0][dataframes[0]['State/UT'] == 'UNION TERRITORIES:'].index

# Drop the row using the row index
dataframes[0] = dataframes[0].drop(row_index_to_remove)
```

```
# Delete the 'Unnamed: 1' column  
dataframes[0] = dataframes[0].drop('Unnamed: 1', axis=1)
```

Re-ordering the columns

Cleaning the column State/Ut

```
dataframes[0]['State/UT'] = dataframes[0]['State/UT'].str.replace(r'\d+', '').str.strip()
```

```
dataframes[0] = dataframes[0].reset_index(drop=True)
```

```
<ipython-input-71-4369dfa2b349>:1: FutureWarning: The default value of regex will change from True to False in a future version  
    dataframes[0]['State/UT'] = dataframes[0]['State/UT'].str.replace(r'\d+', '').str.strip()
```

```
dataframes[0]
```

	State/UT	Tampering computer source documents (Sec.65)	Computer Related Offences (Total)	A) Computer Related Offences (Sec.66) (Total)	Ransom ware	a1)	a2) Offences other than Ransom ware	B) Dishonestly receiving stolen computer resource or communication device (Sec.66B)	C) IdentityTheft(Sec.66C)
0	Andhra Pradesh	7	264	4	1	3		29	97
1	Arunachal Pradesh	0	1	0	0	0		0	1
2	Assam	5	1113	191	0	191		16	136
3	Bihar	0	24	0	0	0		0	15
4	Chhattisgarh	0	19	5	0	5		1	4
5	Goa	1	0	0	0	0		0	0
6	Gujarat	4	206	3	1	2		6	175
7	Haryana	2	195	39	0	39		11	29
8	Himachal Pradesh	0	25	2	1	1		1	8
9	Jammu & Kashmir	0	22	3	0	3		0	
10	Jharkhand	0	1004	245	87	158		168	331
11	Karnataka	15	11700	134	15	119		28	10482
12	Kerala	1	90	13	1	12		6	21
13	Madhya Pradesh	0	277	17	12	5		1	71
14	Maharashtra	4	408	15	4	11		8	214

Same process done for every dataframe

```
15    Meghalaya      0     72      1      0      1      0      0      0      0
dataframes[1]
```

	Unnamed: 0	Unnamed: 1	Unnamed: 2	A. Offences under I.T.Act
0	NaN	NaN	NaN	Publication/ transmission of obscene /
1	NaN	NaN	Computer Related Offences	NaN
2	NaN	NaN	NaN	sexually explicit act in electronic form (Sec....)
3	S.	NaN	NaN	NaN
4	State/UT	NaN	NaN	Cyber
5	No	NaN	D) Cheating by	Publication/ Terrorism transmission of A) Publ...
6	NaN	NaN	personation by	NaN
7	NaN	NaN	E) Violation of	(Sec.66 F) obscene / transmitting obscene
8	NaN	NaN	using computer	NaN
9	NaN	NaN	Privacy (Sec.66E)	sexually explicit material in Electronic
10	NaN	NaN	resource	NaN
11	NaN	NaN	NaN	act in electronic Form
12	NaN	NaN	(Sec.66D)	NaN
13	NaN	NaN	NaN	form (Total)
14	1 2	NaN	10 11	12 13 14
15	STATES:	NaN	NaN	NaN
16	1 Andhra Pradesh	NaN	132	2 0 25 8
17	2 Arunachal Pradesh	NaN	0	0 0 5 1
18	3 Assam	NaN	745	25 0 731 340
19	4 Bihar	NaN	9	0 0 8 0
20	5 Chhattisgarh	NaN	8	1 0 65 22
21	6 Goa	NaN	0	0 0 2 1
22	7 Gujarat	NaN	16	6 0 67 36
23	8 Haryana	NaN	110	6 0 139 47
24	9 Himachal Pradesh	NaN	14	0 0 43 7
25	10 Jammu & Kashmir	NaN	10	1 1 8 1
26	11 Jharkhand	NaN	244	16 0 7 6
27	12 Karnataka	NaN	1023	33 2 283 181
28	13 Kerala	NaN	35	15 1 112 26
29	14 Madhya Pradesh	NaN	185	3 0 163 71
30	15 Maharashtra	NaN	159	12 0 122 56

```

dataframes[1] = dataframes[1].drop(dataframes[1].index[0:16])
32      1 / Meghalaya      NaN      39      5 U 12 8
dataframes[1]

```

			Unnamed: 0	Unnamed: 1	Unnamed: 2	A. Offences under I.T.Act
16	1 Andhra Pradesh		NaN	132		2 0 25 8
17	2 Arunachal Pradesh		NaN	0		0 0 5 1
18	3 Assam		NaN	745		25 0 731 340
19	4 Bihar		NaN	9		0 0 8 0
20	5 Chhattisgarh		NaN	8		1 0 65 22
21	6 Goa		NaN	0		0 0 2 1
22	7 Gujarat		NaN	16		6 0 67 36
23	8 Haryana		NaN	110		6 0 139 47
24	9 Himachal Pradesh		NaN	14		0 0 43 7
25	10 Jammu & Kashmir		NaN	10		1 1 8 1
26	11 Jharkhand		NaN	244		16 0 7 6
27	12 Karnataka		NaN	1023		33 2 283 181
28	13 Kerala		NaN	35		15 1 112 26
29	14 Madhya Pradesh		NaN	185		3 0 163 71
30	15 Maharashtra		NaN	159		12 0 122 56
31	16 Manipur		NaN	1		0 0 3 0
32	17 Meghalaya		NaN	39		5 0 12 8
33	18 Mizoram		NaN	0		2 0 1 1
34	19 Nagaland		NaN	0		1 0 0 0
35	20 Odisha		NaN	0		3 0 397 53
36	21 Punjab		NaN	9		3 1 68 24
37	22 Rajasthan		NaN	272		21 0 112 38
38	23 Sikkim		NaN	0		0 0 2 1
39	24 Tamil Nadu		NaN	30		12 4 157 94
40	25 Telangana		NaN	1445		2 0 139 6
41	26 Tripura		NaN	5		0 0 9 4

```
# Split the 'A. Offences under I.T.Act' column based on spaces and create new columns in the first DataFrame (dataframes[0])
dataframes[1][[ 'E') Violation of Privacy (Sec.66E)', 'Cyber Terrorism (Sec.66 F)', 'Publication/ transmission of obscene / sexuall:
```

```
# Drop the original 'A. Offences under I.T.Act' column in the first DataFrame (dataframes[0])
dataframes[1] = dataframes[1].drop('A. Offences under I.T.Act', axis=1)
```

```
# Now, the first DataFrame (dataframes[0]) will have separate columns for each value
print(dataframes[1])
```

			Unnamed: 0	Unnamed: 1	Unnamed: 2	\
16	1 Andhra Pradesh		NaN	132		
17	2 Arunachal Pradesh		NaN	0		
18	3 Assam		NaN	745		
19	4 Bihar		NaN	9		
20	5 Chhattisgarh		NaN	8		
21	6 Goa		NaN	0		
22	7 Gujarat		NaN	16		
23	8 Haryana		NaN	110		
24	9 Himachal Pradesh		NaN	14		
25	10 Jammu & Kashmir		NaN	10		
26	11 Jharkhand		NaN	244		
27	12 Karnataka		NaN	1023		
28	13 Kerala		NaN	35		
29	14 Madhya Pradesh		NaN	185		
30	15 Maharashtra		NaN	159		
31	16 Manipur		NaN	1		
32	17 Meghalaya		NaN	39		
33	18 Mizoram		NaN	0		
34	19 Nagaland		NaN	0		
35	20 Odisha		NaN	0		
36	21 Punjab		NaN	9		
37	22 Rajasthan		NaN	272		
38	23 Sikkim		NaN	0		
39	24 Tamil Nadu		NaN	30		
40	25 Telangana		NaN	1445		
41	26 Tripura		NaN	5		

42	27	Uttar Pradesh	NaN	980
43	28	Uttarakhand	NaN	33
44	29	West Bengal	NaN	2
45	TOTAL STATE(S)		NaN	5506
46	UNION TERRITORIES:		NaN	NaN
47	30	A&N Islands	NaN	0
48	31	Chandigarh	NaN	1
49	32	D&N Haveli	NaN	0
50	33	Daman & Diu	NaN	0
51	34	Delhi	NaN	11
52	35	Lakshadweep	NaN	0
53	36	Puducherry	NaN	2
54	TOTAL UT(S)		NaN	14
55	TOTAL ALL INDIA		NaN	5520

E) Violation of Privacy (Sec.66E)	Cyber Terrorism (Sec.66 F)	\
16	2	0
17	0	0
18	25	0
19	0	0
20	1	0
21	0	0
22	6	0
23	6	0
24	0	0
25	1	1
26	16	0
27	33	2
28	15	1
29	3	0
30	12	0

```
dataframes[1].rename(columns={
    'Unnamed: 0': 'State/UT',
    'Unnamed: 2': 'D) Cheating by impersonation by using computer resource (Sec.66D)'
}, inplace=True)

# Delete the 'Unnamed: 1' column
dataframes[1] = dataframes[1].drop('Unnamed: 1', axis=1)

dataframes[1]
```

	State/UT	D) Cheating by impersonation by using computer resource (Sec.66D)	E) Violation of Privacy (Sec.66E)	Cyber Terrorism (Sec.66 F)	Publication/ transmission of obscene / sexually explicit act in electronic form (Total)	A) Publishing or transmitting obscene material in Electronic Form
16	1 Andhra Pradesh	132	2	0	25	8
17	2 Arunachal Pradesh	0	0	0	5	1
18	3 Assam	745	25	0	731	340
19	4 Bihar	9	0	0	8	0
20	5 Chhattisgarh	8	1	0	65	22
21	6 Goa	0	0	0	2	1
22	7 Gujarat	16	6	0	67	36
23	8 Haryana	110	6	0	139	47
24	9 Himachal Pradesh	14	0	0	43	7
25	10 Jammu & Kashmir	10	1	1	8	1
26	11 Jharkhand	244	16	0	7	
27	12 Karnataka	1023	33	2	283	181
28	13 Kerala	35	15	1	112	26
29	14 Madhya Pradesh	185	3	0	163	71
30	15 Maharashtra	159	12	0	122	56

```
# Find the row index that contains the specified data
```

```
row_index_to_remove = dataframes[1][dataframes[1]['State/UT'] == 'UNION TERRITORIES'].index
```

```
# Drop the row using the row index
```

```
dataframes[1] = dataframes[1].drop(row_index_to_remove)
```

```
-- -- -- -- --
```

```
dataframes[1]['State/UT'] = dataframes[1]['State/UT'].str.replace(r'\d+', '').str.strip()
```

```
dataframes[1] = dataframes[1].reset_index(drop=True)
```

```
<ipython-input-80-c0de1f9a87ea>:1: FutureWarning: The default value of regex will change from True to False in a future version
dataframes[1]['State/UT'] = dataframes[1]['State/UT'].str.replace(r'\d+', '').str.strip()
```

```
dataframes[1]
```

	State/UT	D) Cheating by impersonation by using computer resource (Sec. 66D)	E) Violation of Privacy (Sec. 66E)	Cyber Terrorism (Sec. 66 F)	Publication/ transmission of obscene / sexually explicit act in electronic form (Total)	A) Publishing or transmitting obscene material in Electronic Form
0	Andhra Pradesh	132	2	0	25	8
1	Arunachal Pradesh	0	0	0	5	1
2	Assam	745	25	0	731	340
3	Bihar	9	0	0	8	0
4	Chhattisgarh	8	1	0	65	22
5	Goa	0	0	0	2	1
6	Gujarat	16	6	0	67	36
7	Haryana	110	6	0	139	47
8	Himachal Pradesh	14	0	0	43	7
9	Jammu & Kashmir	10	1	1	8	1
10	Jharkhand	244	16	0	7	
11	Karnataka	1023	33	2	283	181
12	Kerala	35	15	1	112	26
13	Madhya Pradesh	185	3	0	163	71
14	Maharashtra	159	12	0	122	56
15	Manipur	1	0	0	3	0
16	Meghalaya	39	5	0	12	8
17	Mizoram	0	2	0	1	1
18	Nagaland	0	1	0	0	0
19	Odisha	0	3	0	397	53
20	Punjab	9	3	1	68	24
21	Rajasthan	272	21	0	112	38

dataframes[2]

	Unnamed: 0	Unnamed: 1	A. Offences under I.T.Act	Unnamed: 2
0	NaN	NaN	Publication/transmission of obscene / sexually...	NaN
1	NaN	NaN	form (Sec. 67)	NaN
2	NaN	NaN		Interception or
3	S.	NaN		NaN
4	State/UT	NaN	C) Publishing or	NaN
5	No	NaN	B) Publishing ortransmitting of D) Preservatio...	Monitoring or
6	NaN	NaN		transmitting of decryption of
7	NaN	NaN	material depicting and retention of sub-	NaN
8	NaN	NaN	material containing	Information

```
dataframes[2] = dataframes[2].drop(dataframes[2].index[0:18])
```

```
# Split the 'A. Offences under I.T.Act' column based on spaces and create new columns in the first DataFrame (dataframes[0])
dataframes[2][[ 'B') Publishing ortransmitting of material containing Sexually explicit act in electronic form (Sec.67A)', 'C) Publ:
```

```
# Drop the original 'A. Offences under I.T.Act' column in the first DataFrame (dataframes[0])
dataframes[2] = dataframes[2].drop('A. Offences under I.T.Act', axis=1)
```

```
# Now, the first DataFrame (dataframes[0]) will have separate columns for each value
print(dataframes[2])
```

```
dataframes[2].rename(columns={
    'Unnamed: 0': 'State/UT',
    'Unnamed: 2': 'Interception or Monitoring or decryption of Information (Sec.69)'

}, inplace=True)
```

```
# Find the row index that contains the specified data
row_index_to_remove = dataframes[2][dataframes[2]['State/UT'] == 'UNION TERRITORIES'].index
```

```
# Drop the row using the row index
dataframes[2] = dataframes[2].drop(row_index_to_remove)
```

```
# Delete the 'Unnamed: 1' column
dataframes[2] = dataframes[2].drop('Unnamed: 1', axis=1)
```

```
# Reorder the columns with 'C) IdentityTheft(Sec.66C)' in the 8th position
dataframes[2] = dataframes[2][['State/UT',
    'B) Publishing ortransmitting of material containing Sexually explicit act in electronic form (Sec.67A)',
    'C) Publishing ortransmitting of material depicting children in Sexually explicit act in electronic',
    'D) Preservationand retention of information by intermediaries (Sec.67C)',
    'E) Othersubsections of Sec. 67 IT Act',
    'Interception or Monitoring or decryption of Information (Sec.69)']]
```

```
dataframes[2]['State/UT'] = dataframes[2]['State/UT'].str.replace(r'\d+', '').str.strip()
```

```
dataframes[2] = dataframes[2].reset_index(drop=True)
```

	Unnamed: 0	Unnamed: 1	Unnamed: 2	\
18	1 Andhra Pradesh	NaN	0	
19	2 Arunachal Pradesh	NaN	0	
20	3 Assam	NaN	0	
21	4 Bihar	NaN	0	
22	5 Chhattisgarh	NaN	0	
23	6 Goa	NaN	0	
24	7 Gujarat	NaN	0	
25	8 Haryana	NaN	0	
26	9 Himachal Pradesh	NaN	0	
27	10 Jammu & Kashmir	NaN	0	
28	11 Jharkhand	NaN	0	
29	12 Karnataka	NaN	0	
30	13 Kerala	NaN	0	
31	14 Madhya Pradesh	NaN	0	
32	15 Maharashtra	NaN	0	
33	16 Manipur	NaN	0	
34	17 Meghalaya	NaN	0	
35	18 Mizoram	NaN	0	
36	19 Nagaland	NaN	0	
37	20 Odisha	NaN	0	
38	21 Punjab	NaN	0	

39	22	Rajasthan	NaN	0
40	23	Sikkim	NaN	0
41	24	Tamil Nadu	NaN	0
42	25	Telangana	NaN	0
43	26	Tripura	NaN	0
44	27	Uttar Pradesh	NaN	9
45	28	Uttarakhand	NaN	0
46	29	West Bengal	NaN	0
47	TOTAL STATE(S)		NaN	9
48	UNION TERRITORIES:		NaN	NaN
49	30	A&N Islands	NaN	0
50	31	Chandigarh	NaN	0
51	32	D&N Haveli	NaN	0
52	33	Daman & Diu	NaN	0
53	34	Delhi	NaN	0
54	35	Lakshadweep	NaN	0
55	36	Puducherry	NaN	0
56	TOTAL UT(S)		NaN	0
57	TOTAL ALL INDIA		NaN	9

B) Publishing or transmitting of material containing Sexually explicit act in electronic form (Sec.67A) \

18		10
19		4
20		147
21		4
22		25
23		1
24		27
25		54
26		25
27		3
28		1
29		97
30		46
31		72
32		43

dataframes[2]

State/UT	B) Publishing ortransmitting of material containing Sexually explicit act in electronic form	C) Publishing ortransmitting of material depicting children in Sexually explicit act in electronic form	D) Preservation and retention of information by intermediaries (Sec. 67C)	E) Othersub-sections of Sec. 67 IT Act	Interception or Monitoring or decryption of Information (Sec. 69)
dataframes[3]					

	Unnamed: 0	Unnamed: 1	Unnamed: 2	A. Offences under I.T.Act	Unnamed: 3	Unnamed: 4
0		NaN	NaN	Un-authorized	NaN	NaN
1		NaN	NaN	NaN	NaN	Total
2		S.	NaN	access/attempts	Abetment to Attempt to	NaN
3		State/UT	NaN	NaN	NaN	Offences
4		No	NaN	to access to	Commit Commit Other Sections	NaN
5		NaN	NaN	Offences Offences of IT Act	NaN	NaN

```
dataframes[3] = dataframes[3].drop(dataframes[3].index[0:10])
```

```
# Split the 'A. Offences under I.T.Act' column based on spaces and create new columns in the first DataFrame (dataframes[0])
dataframes[3][['Abetment to Commit Offences (Sec.84 B)', 'Attempt to Commit Offences (Sec.84C)', 'Other Sections of IT Act']] = dataframes[3]['A. Offences under I.T.Act'].str.split(' ', expand=True)

# Drop the original 'A. Offences under I.T.Act' column in the first DataFrame (dataframes[0])
dataframes[3] = dataframes[3].drop('A. Offences under I.T.Act', axis=1)

# Now, the first DataFrame (dataframes[0]) will have separate columns for each value
print(dataframes[3])
```

	Unnamed: 0	Unnamed: 1	Unnamed: 2	Unnamed: 3	Unnamed: 4	\
10	1 Andhra Pradesh	NaN	0	340	NaN	
11	2 Arunachal Pradesh	NaN	0	NaN	6.0	
12	3 Assam	NaN	0	1989	NaN	
13	4 Bihar	NaN	0	32	NaN	
14	5 Chhattisgarh	NaN	0	85	NaN	
15	6 Goa	NaN	0	NaN	3.0	
16	7 Gujarat	NaN	0	294	NaN	
17	8 Haryana	NaN	0	346	NaN	
18	9 Himachal Pradesh	NaN	0	69	NaN	
19	10 Jammu & Kashmir	NaN	0	35	NaN	
20	11 Jharkhand	NaN	0	1015	NaN	
21	12 Karnataka	NaN	0	12007	NaN	
22	13 Kerala	NaN	0	218	NaN	
23	14 Madhya Pradesh	NaN	0	447	NaN	
24	15 Maharashtra	NaN	1	551	NaN	
25	16 Manipur	NaN	0	NaN	4.0	
26	17 Meghalaya	NaN	0	85	NaN	
27	18 Mizoram	NaN	0	NaN	6.0	
28	19 Nagaland	NaN	0	NaN	2.0	
29	20 Odisha	NaN	0	410	NaN	
30	21 Punjab	NaN	0	107	NaN	
31	22 Rajasthan	NaN	0	1074	NaN	
32	23 Sikkim	NaN	0	NaN	2.0	
33	24 Tamil Nadu	NaN	0	268	NaN	
34	25 Telangana	NaN	0	1629	NaN	
35	26 Tripura	NaN	0	18	NaN	
36	27 Uttar Pradesh	NaN	1	9353	NaN	
37	28 Uttarakhand	NaN	0	83	NaN	
38	29 West Bengal	NaN	0	181	NaN	
39	TOTAL STATE(S)	NaN	2	30659	NaN	
40	UNION TERRITORIES:	NaN	NaN	NaN	NaN	
41	30 A&N Islands	NaN	0	NaN	0.0	
42	31 Chandigarh	NaN	0	NaN	7.0	
43	32 D&N Haveli	NaN	0	NaN	0.0	
44	33 Daman & Diu	NaN	0	NaN	3.0	
45	34 Delhi	NaN	0	52	NaN	
46	35 Lakshadweep	NaN	0	NaN	4.0	
47	36 Puducherry	NaN	0	NaN	4.0	
48	TOTAL UT(S)	NaN	0	70	NaN	
49	TOTAL ALL INDIA	NaN	2	30729	NaN	

	Abetment to Commit Offences (Sec.84 B)	\
10	0	
11	0	
12	0	
13	0	
14	0	
15	0	
16	0	
17	0	
18	0	
19	0	
20	0	
21	0	
22	0	
23	0	
24	0	
49	30 Puducherry	INR
		U
		U U U
		INR
		4.0

```
dataframes[3].rename(columns={  
    'Unnamed: 0': 'State/UT',  
    'Unnamed: 2': 'Un-authorized access/attempts to access to protected computer system (Sec.70)'  
}, inplace=True)  
  
# Find the row index that contains the specified data  
row_index_to_remove = dataframes[3][dataframes[3]['State/UT'] == 'UNION TERRITORIES:'].index  
  
# Drop the row using the row index  
dataframes[3] = dataframes[3].drop(row_index_to_remove)  
  
dataframes[3]
```

```
dataframes[3]['State/UT'] = dataframes[3]['State/UT'].str.replace(r'\d+', '').str.strip()  
dataframes[3] = dataframes[3].reset_index(drop=True)
```

```
<ipython-input-92-429cf243c38c>:1: FutureWarning: The default value of regex will change from True to False in a future version
  dataframes[3]['State/UT'] = dataframes[3]['State/UT'].str.replace(r'\d+', '').str.strip()
```

		1	protected computer system	3	4	Offences	Sec. 84C	Total
	State/UT	Unnamed: 1	Un-authorized access/attempts to access to protected computer system (Sec.70)	Unnamed: 3	Unnamed: 4	Abetment to Commit Offences (Sec.84 B)	Attempt to Commit Offences (Sec.84C)	Other Sections of IT Act
0	Andhra Pradesh	NaN		0	340	NaN	0	0
1	Arunachal Pradesh	NaN		0	NaN	6.0	0	0
2	Assam	NaN		0	1989	NaN	0	0
3	Bihar	NaN		0	32	NaN	0	0
4	Chhattisgarh	NaN		0	85	NaN	0	0
5	Goa	NaN		0	NaN	3.0	0	0
6	Gujarat	NaN		0	294	NaN	0	10
7	Haryana	NaN		0	346	NaN	0	0
8	Himachal Pradesh	NaN		0	69	NaN	0	0
9	Jammu & Kashmir	NaN		0	35	NaN	0	4
10	Jharkhand	NaN		0	1015	NaN	0	4
11	Karnataka	NaN		0	12007	NaN	0	7
12	Kerala	NaN		0	218	NaN	0	14
13	Madhya Pradesh	NaN		0	447	NaN	0	5
14	Maharashtra	NaN		1	551	NaN	0	16
15	Manipur	NaN		0	NaN	4.0	0	0
16	Meghalaya	NaN		0	85	NaN	0	1
17	Mizoram	NaN		0	NaN	6.0	0	0
18	Nagaland	NaN		0	NaN	2.0	0	0
19	Odisha	NaN		0	410	NaN	0	9
20	Punjab	NaN		0	107	NaN	0	12
21	Rajasthan	NaN		0	1074	NaN	0	414
22	Sikkim	NaN		0	NaN	2.0	0	0
23	Tamil Nadu	NaN		0	268	NaN	0	8
24	Telangana	NaN		0	1629	NaN	0	3
25	Tripura	NaN		0	18	NaN	0	0
26	Uttar Pradesh	NaN		1	9353	NaN	0	1937
dataframes[3]['Total Offences under I.T. Act'] = dataframes[3]['Unnamed: 3'].fillna(dataframes[3]['Unnamed: 4'])								
-- TOTAL -- -- -- -- -- -- -- -- --								

dataframes[3]

	State/UT	Unnamed: 1	Un-authorized access/attempts to access to protected computer system (Sec.70)	Unnamed: 3	Unnamed: 4	Abetment to Commit Offences (Sec.84 B)	Attempt to Commit Offences (Sec.84C)	Other Sections of IT Act	Total Offences under I.T. Act
0	Andhra Pradesh	NaN	0	340	NaN	0	0	44	340
1	Arunachal Pradesh	NaN	0	NaN	6.0	0	0	0	6.0
2	Assam	NaN	0	1989	NaN	0	0	140	1989
3	Bihar	NaN	0	32	NaN	0	0	0	32
4	Chhattisgarh	NaN	0	85	NaN	0	0	1	85
5	Goa	NaN	0	NaN	3.0	0	0	0	3.0
6	Gujarat	NaN	0	294	NaN	0	10	7	294
7	Haryana	NaN	0	346	NaN	0	0	10	346
8	Himachal Pradesh	NaN	0	69	NaN	0	0	1	69
9	Jammu & Kashmir	NaN	0	35	NaN	0	0	4	
10	Jharkhand	NaN	0	1015	NaN	0	0	4	1015
11	Karnataka	NaN	0	12007	NaN	0	0	7	12007
12	Kerala	NaN	0	218	NaN	0	0	14	218
13	Madhya Pradesh	NaN	0	447	NaN	0	2	5	447
14	Maharashtra	NaN	1	551	NaN	0	0	16	551
15	Manipur	NaN	0	NaN	4.0	0	0	0	4.0
16	Meghalaya	NaN	0	85	NaN	0	0	1	85
17	Mizoram	NaN	0	NaN	6.0	0	0	0	6.0
18	Nagaland	NaN	0	NaN	2.0	0	0	0	2.0
19	Odisha	NaN	0	410	NaN	0	0	9	410
20	Punjab	NaN	0	107	NaN	0	0	12	107
21	Rajasthan	NaN	0	1074	NaN	0	0	414	1074
22	Sikkim	NaN	0	NaN	2.0	0	0	0	2.0
23	Tamil Nadu	NaN	0	268	NaN	0	1	8	268
24	Telangana	NaN	0	1629	NaN	0	0	3	1629

```
dataframes[3] = dataframes[3].drop(columns=['Unnamed: 3', 'Unnamed: 4'])
```

```
# Convert "Total Offences under I.T. Act" column to integers
dataframes[3]['Total Offences under I.T. Act'] = dataframes[3]['Total Offences under I.T. Act'].astype(int)
```

```
# Delete the 'Unnamed: 1' column
```

```
dataframes[3] = dataframes[3].drop('Unnamed: 1', axis=1)
```

30	A&N Islands	NaN	0	NaN	0.0	0	0	0	0.0
dataframes[3]									

	State/UT	Un-authorized access/attempt to access to protected computer system (Sec.70)	Abetment to Commit Offences (Sec.84 B)	Attempt to Commit Offences (Sec.84C)	Other Sections of IT Act	Total Offences under I.T. Act
0	Andhra Pradesh	0	0	0	44	340
1	Arunachal Pradesh	0	0	0	0	6
2	Assam	0	0	0	140	1989
3	Bihar	0	0	0	0	32
4	Chhattisgarh	0	0	0	1	85
5	Goa	0	0	0	0	3
6	Gujarat	0	0	10	7	294
7	Haryana	0	0	0	10	346
8	Himachal Pradesh	0	0	0	1	69
9	Jammu & Kashmir	0	0	0	4	35
10	Jharkhand	0	0	0	4	
11	Karnataka	0	0	0	7	12007
12	Kerala	0	0	0	14	218
13	Madhya Pradesh	0	0	2	5	447
14	Maharashtra	1	0	0	16	551
15	Manipur	0	0	0	0	4
16	Meghalaya	0	0	0	1	85
17	Mizoram	0	0	0	0	6
18	Nagaland	0	0	0	0	2
19	Odisha	0	0	0	9	410
20	Punjab	0	0	0	12	107
21	Rajasthan	0	0	0	414	1074
22	Sikkim	0	0	0	0	2
23	Tamil Nadu	0	0	1	8	268
24	Telangana	0	0	0	3	1629
25	Trincomalee	0	0	0	0	18

dataframes[4]

Unnamed: 0 Unnamed: 1 B. IPC Crimes(Involved Communication Devices as Medium/Target or r/w IT Act)

0	NaN	NaN	Fraud (Sec.420 r/w Sec.465, 468-
1	NaN	NaN	471 IPC)
2	NaN	NaN	Cyber Stalking/
3	S.	NaN	Abetment of
4	State/UT	NaN	Bullying of
5	No	NaN	Suicide (Online) Data theft
6	NaN	NaN	Women/
7	NaN	NaN	(Sec.305/306 (Sec.379 to 381)
8	NaN	NaN	Children Fraud (Sec.420
9	NaN	NaN	IPC) A Credit
10	NaN	NaN	(Sec.354D IPC) r/w Sec.465,468- Card/Debit Card
11	NaN	NaN	471 IPC) (Total)
12	1 2	NaN	25 26 27 28 29

```
dataframes[4] = dataframes[4].drop(dataframes[4].index[0:14])
```

```
# Split the 'A. Offences under I.T.Act' column based on spaces and create new columns in the first DataFrame (dataframes[0])
dataframes[4][[ 'Abetment of Suicide (Online) (Sec.305/306 IPC)', 'Cyber Stalking/ Bullying of Women/ Children (Sec.354D IPC)', 'Di
```

```
# Drop the original 'A. Offences under I.T.Act' column in the first DataFrame (dataframes[0])
dataframes[4] = dataframes[4].drop('B. IPC Crimes(Involved Communication Devices as Medium/Target or r/w IT Act)', axis=1)
```

```
# Now, the first DataFrame (dataframes[0]) will have separate columns for each value
print(dataframes[4])
```

```
dataframes[4].rename(columns={  
    'Unnamed: 0': 'State/UT'  
}, inplace=True)
```

```
# Find the row index that contains the specified data
row_index_to_remove = dataframes[4][dataframes[4]['State/UT'] == 'UNION TERRITORIES'].index
```

```
# Drop the row using the row index
dataframes[4] = dataframes[4].drop(row_index_to_remove)
```

```
# Delete the 'Unnamed: 1' column
dataframes[4] = dataframes[4].drop('Unnamed: 1', axis=1)
```

```
dataframes[4]['State/UT'] = dataframes[4]['State/UT'].str.replace(r'\d+', '').str.strip()
```

```
dataframes[4] = dataframes[4].reset_index(drop=True)
```

	Unnamed: 0	Unnamed: 1	\
14	1 Andhra Pradesh	NaN	
15	2 Arunachal Pradesh	NaN	
16	3 Assam	NaN	
17	4 Bihar	NaN	
18	5 Chhattisgarh	NaN	
19	6 Goa	NaN	
20	7 Gujarat	NaN	
21	8 Haryana	NaN	
22	9 Himachal Pradesh	NaN	
23	10 Jammu & Kashmir	NaN	
24	11 Jharkhand	NaN	
25	12 Karnataka	NaN	
26	13 Kerala	NaN	
27	14 Madhya Pradesh	NaN	
28	15 Maharashtra	NaN	
29	16 Manipur	NaN	
30	17 Meghalaya	NaN	
31	18 Mizoram	NaN	
32	19 Nagaland	NaN	
33	20 Odisha	NaN	
34	21 Punjab	NaN	
35	22 Rajasthan	NaN	
36	23 Sikkim	NaN	
37	24 Tamil Nadu	NaN	

38	25	Telangana	NaN
39	26	Tripura	NaN
40	27	Uttar Pradesh	NaN
41	28	Uttarakhand	NaN
42	29	West Bengal	NaN
43		TOTAL STATE(S)	NaN
44		UNION TERRITORIES:	NaN
45	30	A&N Islands	NaN
46	31	Chandigarh	NaN
47	32	D&N Haveli	NaN
48	33	Daman & Diu	NaN
49	34	Delhi	NaN
50	35	Lakshadweep	NaN
51	36	Puducherry	NaN
52		TOTAL UT(S)	NaN
53		TOTAL ALL INDIA	NaN

		Abetment of Suicide (Online) (Sec.305/306 IPC) \	
14			0
15			0
16			0
17			0
18			0
19			1
20			2
21			0
22			0
23			0
24			0
25			0
26			0
27			0
28			3

dataframes[4]

State/UT	Abetment of Suicide (Online) (Sec.305/306 IPC)	Cyber Stalking/ Bullying of Women/ Children (Sec.354D IPC)	Data theft (Sec.379 to 381)	Fraud (Sec.420 r/w Sec.465,468-471 IPC) (Total)	CreditCard/Debit Card	A)
----------	--	--	-----------------------------------	---	--------------------------	----

```
dataframes[5]
```

```
dataframes[5] = dataframes[5].drop(dataframes[5].index[0:9])

# Split the 'A. Offences under I.T.Act' column based on spaces and create new columns in the first DataFrame (dataframes[0])
dataframes[5][[ 'B) ATMs', 'C) Online Banking Fraud ', 'D) OTP Frauds','E) Others','Cheating (Sec.420)']] = dataframes[5]['B. IPC Cr

# Drop the original 'A. Offences under I.T.Act' column in the first DataFrame (dataframes[0])
dataframes[5] = dataframes[5].drop('B. IPC Crimes(Involved Communication Devices as Medium/Target or r/w IT Act)', axis=1)

# Now, the first DataFrame (dataframes[0]) will have separate columns for each value
print(dataframes[5])

dataframes[5].rename(columns={
    'Unnamed: 0': 'State/UT'

}, inplace=True)

# Find the row index that contains the specified data
row_index_to_remove = dataframes[5][dataframes[5]['State/UT'] == 'UNION TERRITORIES:'].index
```

```
# Drop the row using the row index
```

```
dataframes[5] = dataframes[5].drop(row_index_to_remove)
```

```
# Delete the 'Unnamed: 1' column
```

```
dataframes[5] = dataframes[5].drop('Unnamed: 1', axis=1)
```

```
dataframes[5]['State/UT'] = dataframes[5]['State/UT'].str.replace(r'\d+', '').str.strip()
```

```
dataframes[5] = dataframes[5].reset_index(drop=True)
```

	Unnamed: 0	Unnamed: 1	B) ATMs	C) Online Banking	Fraud	\
9	1 Andhra Pradesh		NaN	68	356	
10	2 Arunachal Pradesh		NaN	0	0	
11	3 Assam		NaN	0	25	
12	4 Bihar		NaN	792	24	
13	5 Chhattisgarh		NaN	8	4	
14	6 Goa		NaN	0	0	
15	7 Gujarat		NaN	13	33	
16	8 Haryana		NaN	38	51	
17	9 Himachal Pradesh		NaN	0	0	
18	10 Jammu & Kashmir		NaN	0	5	
19	11 Jharkhand		NaN	13	0	
20	12 Karnataka		NaN	3	4	
21	13 Kerala		NaN	0	6	
22	14 Madhya Pradesh		NaN	6	6	
23	15 Maharashtra		NaN	454	552	
24	16 Manipur		NaN	0	0	
25	17 Meghalaya		NaN	0	0	
26	18 Mizoram		NaN	0	0	
27	19 Nagaland		NaN	0	0	
28	20 Odisha		NaN	331	545	
29	21 Punjab		NaN	14	10	
30	22 Rajasthan		NaN	73	126	
31	23 Sikkim		NaN	0	0	
32	24 Tamil Nadu		NaN	0	3	
33	25 Telangana		NaN	50	35	
34	26 Tripura		NaN	0	0	
35	27 Uttar Pradesh		NaN	202	306	
36	28 Uttarakhand		NaN	1	0	
37	29 West Bengal		NaN	0	0	
38	TOTAL STATE(S)		NaN	2066	2091	
39	UNION TERRITORIES:		NaN	NaN	NaN	
40	30 A&N Islands		NaN	0	0	
41	31 Chandigarh		NaN	0	0	
42	32 D&N Haveli		NaN	0	0	
43	33 Daman & Diu		NaN	0	0	
44	34 Delhi		NaN	1	2	
45	35 Lakshadweep		NaN	0	0	
46	36 Puducherry		NaN	0	0	
47	TOTAL UT(S)		NaN	1	2	
48	TOTAL ALL INDIA		NaN	2067	2093	

D) OTP Frauds E) Others Cheating (Sec.420)

9	108	167	347
10	0	0	0
11	0	58	24
12	20	148	7
13	7	16	7
14	0	0	9
15	28	14	181
16	0	18	6
17	0	0	0
18	0	1	3
19	5	0	35
20	0	0	1
21	2	2	20
22	1	12	15
23	131	385	1698

```
dataframes[5]
```

	State/UT	B) ATMs	C) Online Banking Fraud	D) OTP Frauds	E) Others	Cheating (Sec.420)
0	Andhra Pradesh	68	356	108	167	347
1	Arunachal Pradesh	0	0	0	0	0
2	Assam	0	25	0	58	24
3	Bihar	792	24	20	148	7
4	Chhattisgarh	8	4	7	16	7
5	Goa	0	0	0	0	9
6	Gujarat	13	33	28	14	181
7	Haryana	38	51	0	18	6
8	Himachal Pradesh	0	0	0	0	0
9	Jammu & Kashmir	0	5	0	1	3
10	Jharkhand	13	0	5	0	35
11	Karnataka	3	4	0	0	1
12	Kerala	0	6	2	2	20
13	Madhya Pradesh	6	6	1	12	15
14	Maharashtra	454	552	131	385	1698
15	Manipur	0	0	0	0	0
16	Meghalaya	0	0	0	0	4
17	Mizoram	0	0	0	0	0
18	Nagaland	0	0	0	0	0
19	Odisha	331	545	1	29	25
20	Punjab	14	10	0	9	39
21	Rajasthan	73	126	36	83	172
22	Sikkim	0	0	0	0	0
23	Tamil Nadu	0	3	1	7	12
24	Telangana	50	35	134	32	349
25	Tripura	0	0	0	0	0
26	Uttar Pradesh	202	306	75	164	382
27	Uttarakhand	1	0	0	2	0
28	West Bengal	0	0	0	4	40
29	TOTAL STATE(S)	2066	2091	549	1151	3376
30	A&N Islands	0	0	0	0	0

dataframes[6]

			B. IPC Crimes(Involving Communication Devices as Medium/Target or r/w IT Act)	
--	--	--	---	--

0	NaN	NaN		Counterfeiting	NaN
1	NaN	NaN		Defamation/	NaN
2	NaN	NaN		Morphing	NaN
3	S. No State/UT	NaN			NaN
4	NaN	NaN	Forgery (Sec.465, (Sec.469 IPC r/w Fake Profil...		NaN
5	NaN	NaN	468 & 471) IPC and Indecent IPC/SLL A) Currency		NaN
6	NaN	NaN	representation of Counterfeiting (Sec.489A to		NaN
7	NaN	NaN	women Act) (Total) 489E)		NaN
8	1 2	NaN	35 36 37 38 39		NaN
9	STATES:	NaN		NaN	NaN
10	1 Andhra Pradesh	NaN	80 5 25 0		0.0
11	2 Arunachal Pradesh	NaN	0 0 0 0		0.0
12	3 Assam	NaN	0 0 0 0		0.0
13	4 Bihar	NaN	0 0 0 0		0.0
14	5 Chhattisgarh	NaN	4 0 0 0		0.0
15	6 Goa	NaN	0 0 0 0		0.0
16	7 Gujarat	NaN	10 3 8 0		0.0
17	8 Haryana	NaN	2 0 0 1		1.0
18	9 Himachal Pradesh	NaN	0 0 0 0		0.0
19	10 Jammu & Kashmir	NaN	0 0 1 0		0.0
20	11 Jharkhand	NaN	0 0 5 0		0.0
21	12 Karnataka	NaN	0 0 0 0		0.0
22	13 Kerala	NaN	1 0 2 0		0.0
23	14 Madhya Pradesh	NaN	8 1 0 0		0.0
24	15 Maharashtra	NaN	41 2 14 0		0.0
25	16 Manipur	NaN	0 0 0 0		0.0
26	17 Meghalaya	NaN	0 0 0 0		0.0
27	18 Mizoram	NaN	0 0 0 0		0.0
28	19 Nagaland	NaN	0 0 0 0		0.0
29	20 Odisha	NaN	0 0 0 0		0.0
30	21 Punjab	NaN	3 1 1 0		0.0
31	22 Rajasthan	NaN	11 0 12 0		0.0
32	23 Sikkim	NaN	0 0 0 0		0.0
33	24 Tamil Nadu	NaN	2 6 0 0		0.0

```
dataframes[6] = dataframes[6].drop(dataframes[6].index[0:10])
```

```
# Split the 'A. Offences under I.T.Act' column based on spaces and create new columns in the first DataFrame (dataframes[0])
dataframes[6][[ 'Forgery (Sec.465, 468 & 471)', 'Defamation/ Morphing (Sec.469 IPC r/w IPC and Indecent representation of women Ac...
```

```
# Drop the original 'A. Offences under I.T.Act' column in the first DataFrame (dataframes[0])
dataframes[6] = dataframes[6].drop('B. IPC Crimes(Involving Communication Devices as Medium/Target or r/w IT Act)', axis=1)
```

```
# Now, the first DataFrame (dataframes[0]) will have separate columns for each value
print(dataframes[6])
```

```
dataframes[6].rename(columns={
    'Unnamed: 0': 'State/UT',
    'Unnamed: 2':'A) Currency(Sec.489A to 489E)'
}, inplace=True)
```

```
# Find the row index that contains the specified data
row_index_to_remove = dataframes[6][dataframes[6]['State/UT'] == 'UNION TERRITORIES'].index
```

```
# Drop the row using the row index
dataframes[6] = dataframes[6].drop(row_index_to_remove)

# Delete the 'Unnamed: 1' column
dataframes[6] = dataframes[6].drop('Unnamed: 1', axis=1)
```

```
dataframes[6]['State/UT'] = dataframes[6]['State/UT'].str.replace(r'\d+', '').str.strip()

dataframes[6] = dataframes[6].reset_index(drop=True)
```

		Unnamed: 0	Unnamed: 1	Unnamed: 2	Forgery (Sec.465, 468 & 471) \
10	1 Andhra Pradesh		NaN	0.0	80
11	2 Arunachal Pradesh		NaN	0.0	0
12	3 Assam		NaN	0.0	0
13	4 Bihar		NaN	0.0	0
14	5 Chhattisgarh		NaN	0.0	4
15	6 Goa		NaN	0.0	0
16	7 Gujarat		NaN	0.0	10
17	8 Haryana		NaN	1.0	2
18	9 Himachal Pradesh		NaN	0.0	0
19	10 Jammu & Kashmir		NaN	0.0	0
20	11 Jharkhand		NaN	0.0	0
21	12 Karnataka		NaN	0.0	0
22	13 Kerala		NaN	0.0	1
23	14 Madhya Pradesh		NaN	0.0	8
24	15 Maharashtra		NaN	0.0	41
25	16 Manipur		NaN	0.0	0
26	17 Meghalaya		NaN	0.0	0
27	18 Mizoram		NaN	0.0	0
28	19 Nagaland		NaN	0.0	0
29	20 Odisha		NaN	0.0	0
30	21 Punjab		NaN	0.0	3
31	22 Rajasthan		NaN	0.0	11
32	23 Sikkim		NaN	0.0	0
33	24 Tamil Nadu		NaN	0.0	2
34	25 Telangana		NaN	1.0	1
35	26 Tripura		NaN	0.0	0
36	27 Uttar Pradesh		NaN	3.0	340
37	28 Uttarakhand		NaN	0.0	0
38	29 West Bengal		NaN	0.0	5
39	TOTAL STATE(S)		NaN	5.0	508
40	UNION TERRITORIES:		NaN	NaN	NaN
41	30 A&N Islands		NaN	0.0	0
42	31 Chandigarh		NaN	0.0	0
43	32 D&N Haveli		NaN	0.0	0
44	33 Daman & Diu		NaN	0.0	0
45	34 Delhi		NaN	0.0	4
46	35 Lakshadweep		NaN	0.0	0
47	36 Puducherry		NaN	0.0	0
48	TOTAL UT(S)		NaN	0.0	4
49	TOTAL ALL INDIA		NaN	5.0	512

	Defamation/ Morphing (Sec.469 IPC r/w IPC and Indecent representation of women Act) \
10	5
11	0
12	0
13	0
14	0
15	0
16	3
17	0
18	0
19	0
20	0
21	0
22	0
23	1
24	2

```
dataframes[6]
```

	State/UT	A) Currency(Sec.489A to 489E)	Forgery (Sec.465, 468 & 471)	Defamation/ Morphing (Sec.469 IPC r/w IPC and Indecent representation of women Act)	Fake Profile (r/w IPC/SLL)	Counterfeiting (Total)
0	Andhra Pradesh	0.0	80	5	25	0
1	Arunachal Pradesh	0.0	0	0	0	0
2	Assam	0.0	0	0	0	0
3	Bihar	0.0	0	0	0	0
4	Chhattisgarh	0.0	4	0	0	0
5	Goa	0.0	0	0	0	0
6	Gujarat	0.0	10	3	8	0
7	Haryana	1.0	2	0	0	1
8	Himachal Pradesh	0.0	0	0	0	0
9	Jammu & Kashmir	0.0	0	0	1	0
10	Jharkhand	0.0	0	0	5	
11	Karnataka	0.0	0	0	0	0
12	Kerala	0.0	1	0	2	0
13	Madhya Pradesh	0.0	8	1	0	0
14	Maharashtra	0.0	41	2	14	0
15	Manipur	0.0	0	0	0	0
16	Meghalaya	0.0	0	0	0	0
17	Mizoram	0.0	0	0	0	0
18	Nagaland	0.0	0	0	0	0
19	Odisha	0.0	0	0	0	0

```
# Convert "Total Offences under I.T. Act" column to integers
```

```
dataframes[6]['A) Currency(Sec.489A to 489E)'] = dataframes[6]['A) Currency(Sec.489A to 489E)'].astype(int)
```

```
dataframes[7]
```

	Unnamed: 0	Unnamed: 1	B. IPC Crimes(Involved Communication Devices as Medium/Target or r/w IT)	Unnamed: 2
--	------------	------------	--	------------

0	Nan	Nan		Act)	Nan
1	Nan	Nan		Counterfeiting	Nan
2	Nan	Nan		Cyber	Total Offences
3	S. No State/UT	Nan		Fake News on	Nan
4	Nan	Nan		Blackmailing/Threaten Other	under IPC
5	Nan	Nan		Social Media	Nan
6	Nan	Nan		ning Offences	Nan
7	Nan	Nan	B) Stamps (Sec.506,503,384 IPC)(Sec.505)		Nan
8	Nan	Nan		(Sec.255)	Nan
9	1 2	Nan		40 41 42 43	44
10	STATES:	Nan		Nan	Nan
11	1 Andhra Pradesh	Nan		0 34 36 228	1546

```
dataframes[7] = dataframes[7].drop(dataframes[7].index[0:11])
```

```
# Split the 'A. Offences under I.T.Act' column based on spaces and create new columns in the first DataFrame (dataframes[0])
dataframes[7][['B) Stamps(Sec.255)', 'Cyber Blackmailing/Threatening (Sec.506,503,384 IPC)', 'Fake News on Social Media (Sec.505)']]
```

```
# Drop the original 'A. Offences under I.T.Act' column in the first DataFrame (dataframes[0])
dataframes[7] = dataframes[7].drop('B. IPC Crimes(Involved Communication Devices as Medium/Target or r/w IT', axis=1)
```

```
# Now, the first DataFrame (dataframes[0]) will have separate columns for each value
print(dataframes[7])
```

```
dataframes[7].rename(columns={
    'Unnamed: 0': 'State/UT',
    'Unnamed: 2':'Total Offences under IPC '
}, inplace=True)
```

```
# Find the row index that contains the specified data
row_index_to_remove = dataframes[7][dataframes[7]['State/UT'] == 'UNION TERRITORIES'].index
```

```
# Drop the row using the row index
dataframes[7] = dataframes[7].drop(row_index_to_remove)
```

```
# Delete the 'Unnamed: 1' column
dataframes[7] = dataframes[7].drop('Unnamed: 1', axis=1)
```

```
dataframes[7]['State/UT'] = dataframes[6]['State/UT'].str.replace(r'\d+', '').str.strip()
```

```
dataframes[7] = dataframes[7].reset_index(drop=True)
```

11	1 Andhra Pradesh	Nan	1546	\
12	2 Arunachal Pradesh	Nan	0	0
13	3 Assam	Nan	240	0
14	4 Bihar	Nan	1018	0
15	5 Chhattisgarh	Nan	90	0
16	6 Goa	Nan	12	0
17	7 Gujarat	Nan	488	0
18	8 Haryana	Nan	217	0
19	9 Himachal Pradesh	Nan	7	0
20	10 Jammu & Kashmir	Nan	15	0
21	11 Jharkhand	Nan	73	0
22	12 Karnataka	Nan	12	0
23	13 Kerala	Nan	83	0
24	14 Madhya Pradesh	Nan	151	0
25	15 Maharashtra	Nan	4413	0
26	16 Manipur	Nan	0	0
27	17 Meghalaya	Nan	4	0
28	18 Mizoram	Nan	2	0
29	19 Nagaland	Nan	0	0
30	20 Odisha	Nan	1075	0
31	21 Punjab	Nan	134	0

32	22	Rajasthan	NaN	683	0
33	23	Sikkim	NaN	0	0
34	24	Tamil Nadu	NaN	104	0
35	25	Telangana	NaN	1059	0
36	26	Tripura	NaN	2	0
37	27	Uttar Pradesh	NaN	2060	0
38	28	Uttarakhand	NaN	17	0
39	29	West Bengal	NaN	148	0
40	TOTAL STATE(S)		NaN	13653	0
41	UNION TERRITORIES:		NaN	NaN	NaN
42	30	A&N Islands	NaN	2	0
43	31	Chandigarh	NaN	16	0
44	32	D&N Haveli	NaN	0	0
45	33	Daman & Diu	NaN	0	0
46	34	Delhi	NaN	59	0
47	35	Lakshadweep	NaN	0	0
48	36	Puducherry	NaN	0	0
49	TOTAL UT(S)		NaN	77	0
50	TOTAL ALL INDIA		NaN	13730	0

Cyber Blackmailing/Threatening (Sec.506, 503, 384 IPC) \

11		34
12		0
13		104
14		3
15		5
16		0
17		8
18		3
19		0
20		1
21		11
22		0
23		10
24		6
25		33

dataframes[7]

	State/UT	Total Offences under IPC	B) Stamps(Sec.255))	Cyber Blackmailing/Threatening (Sec.506, 503, 384 IPC)	Fake News on Social Media (Sec.505)	Other Offences
0	Karnataka	1546	0	34	36	228
1	Kerala	0	0	0	0	0

dataframes[8]

```

dataframes[8] = dataframes[8].drop(dataframes[8].index[0:5])

# Split the 'A. Offences under I.T.Act' column based on spaces and create new columns in the first DataFrame (dataframes[0])
dataframes[8][[ 'Gambling Act (Online Gambling)', 'Lotteries Act (Online Lotteries)', "Copy Right Act, 1957'", 'Trade Marks Act, 1947' ]]

# Drop the original 'A. Offences under I.T.Act' column in the first DataFrame (dataframes[0])
dataframes[8] = dataframes[8].drop('C. SLL Crimes(Involved Communication Devices as Medium/Target or r/w IT Act)', axis=1)

# Now, the first DataFrame (dataframes[0]) will have separate columns for each value
print(dataframes[8])

dataframes[8].rename(columns={
    'Unnamed: 0': 'State/UT'

}, inplace=True)

```

```
# Find the row index that contains the specified data
row_index_to_remove = dataframes[8][dataframes[8]['State/UT'] == 'UNION TERRITORIES'].index

# Drop the row using the row index
dataframes[8] = dataframes[8].drop(row_index_to_remove)

# Delete the 'Unnamed: 1' column
dataframes[8] = dataframes[8].drop('Unnamed: 1', axis=1)
```

```
dataframes[8]['State/UT'] = dataframes[8]['State/UT'].str.replace(r'\d+', '').str.strip()
```

```
dataframes[8] = dataframes[8].reset_index(drop=True)
```

	Unnamed: 0	Unnamed: 1	Gambling Act (Online Gambling) \
5	1 Andhra Pradesh	NaN	0
6	2 Arunachal Pradesh	NaN	0
7	3 Assam	NaN	0
8	4 Bihar	NaN	0
9	5 Chhattisgarh	NaN	0
10	6 Goa	NaN	0
11	7 Gujarat	NaN	0
12	8 Haryana	NaN	0
13	9 Himachal Pradesh	NaN	0
14	10 Jammu & Kashmir	NaN	0
15	11 Jharkhand	NaN	7
16	12 Karnataka	NaN	0
17	13 Kerala	NaN	0
18	14 Madhya Pradesh	NaN	4
19	15 Maharashtra	NaN	1
20	16 Manipur	NaN	0
21	17 Meghalaya	NaN	0
22	18 Mizoram	NaN	0
23	19 Nagaland	NaN	0
24	20 Odisha	NaN	0
25	21 Punjab	NaN	0
26	22 Rajasthan	NaN	5
27	23 Sikkim	NaN	0
28	24 Tamil Nadu	NaN	0
29	25 Telangana	NaN	1
30	26 Tripura	NaN	0
31	27 Uttar Pradesh	NaN	0
32	28 Uttarakhand	NaN	0
33	29 West Bengal	NaN	0
34	TOTAL STATE(S)	NaN	18
35	UNION TERRITORIES:	NaN	NaN
36	30 A&N Islands	NaN	0
37	31 Chandigarh	NaN	0
38	32 D&N Haveli	NaN	0
39	33 Daman & Diu	NaN	0
40	34 Delhi	NaN	4
41	35 Lakshadweep	NaN	0
42	36 Puducherry	NaN	0
43	TOTAL UT(S)	NaN	4
44	TOTAL ALL INDIA	NaN	22

	Lotteries Act (Online Lotteries) Copy Right Act, 1957' \	
5	0	0
6	0	2
7	1	1
8	0	0
9	0	0
10	0	0
11	0	0
12	0	1
13	0	0
14	0	23
15	0	0
16	0	0
17	0	1
18	0	0
19	0	2

```
dataframes[8]
```

	State/UT	Gambling Act (Online Gambling)	Lotteries Act (Online Lotteries)	Copy Right Act, 1957'	Trade Marks Act, 1999
0	Andhra Pradesh	0	0	0	0
1	Arunachal Pradesh	0	0	2	0
2	Assam	0	1	1	0
3	Bihar	0	0	0	0
4	Chhattisgarh	0	0	0	0
5	Goa	0	0	0	0
6	Gujarat	0	0	0	0
7	Haryana	0	0	1	0
8	Himachal Pradesh	0	0	0	0
9	Jammu & Kashmir	0	0	23	0
10	Jharkhand	7	0	0	0
11	Karnataka	0	0	0	0
12	Kerala	0	0	1	0
13	Madhya Pradesh	4	0	0	0
14	Maharashtra	1	0	2	0
15	Manipur	0	0	0	0
16	Meghalaya	0	0	0	0
17	Mizoram	0	0	0	0
18	Nagaland	0	0	0	0
19	Odisha	0	0	0	0
20	Punjab	0	0	0	0
21	Rajasthan	5	0	0	0
22	Sikkim	0	0	0	0
23	Tamil Nadu	0	6	2	0
24	Telangana	1	2	0	0
25	Tripura	0	0	0	0
26	Uttar Pradesh	0	0	0	0
27	Uttarakhand	0	0	0	0
28	West Bengal	0	0	2	0
29	TOTAL STATE(S)	18	9	34	0
30	A&N Islands	0	0	0	0
31	Chandigarh	0	0	0	0

dataframes[9]

	Unnamed: 0	Unnamed: 1	C. SLL Crimes(Invoving Communication Devices as	Medium/Target or r/w IT Act)	Unnamed: 2
0	NaN	NaN			NaN
1	NaN	NaN			NaN Total Cyber Crimes (IT
2	S. No State/UT	NaN			NaN Act+ IPC r/w IT Act +
3	NaN	NaN	Other SLL Crimes Total Offences under SLL		SLL r/w IT Act)
4	1 2	NaN		49 50	51
5	STATES:	NaN		NaN	NaN
6	1 Andhra Pradesh	NaN		0 0	1886
7	2 Arunachal Pradesh	NaN		0 2	8
8	3 Assam	NaN		0 2	2231
9	4 Bihar	NaN		0 0	1050
10	5 Chhattisgarh	NaN		0 0	175
11	6 Goa	NaN		0 0	15
12	7 Gujarat	NaN		2 2	784
13	8 Haryana	NaN		0 1	564
14	9 Himachal Pradesh	NaN		0 0	76
15	10 Jammu & Kashmir	NaN		0 23	73
16	11 Jharkhand	NaN		0 7	1095
17	12 Karnataka	NaN		1 1	12020
18	13 Kerala	NaN		5 6	307
19	14 Madhya Pradesh	NaN		0 4	602
20	15 Maharashtra	NaN		0 3	4967
21	16 Manipur	NaN		0 0	4
22	17 Meghalaya	NaN		0 0	89
23	18 Mizoram	NaN		0 0	8
24	19 Nagaland	NaN		0 0	2
25	20 Odisha	NaN		0 0	1485
26	21 Punjab	NaN		2 2	243
27	22 Rajasthan	NaN		0 5	1762
28	23 Sikkim	NaN		0 0	2
29	24 Tamil Nadu	NaN		5 13	385
30	25 Telangana	NaN		0 3	2691
31	26 Tripura	NaN		0 0	20
32	27 Uttar Pradesh	NaN		3 3	11416

```
dataframes[9] = dataframes[9].drop(dataframes[9].index[0:6])
```

```
# Split the 'A. Offences under I.T.Act' column based on spaces and create new columns in the first DataFrame (dataframes[0])
dataframes[9][[ 'Other SLL Crimes', 'Total Offences under SLL']] = dataframes[9]['C. SLL Crimes(Invoving Communication Devices as
```

```
# Drop the original 'A. Offences under I.T.Act' column in the first DataFrame (dataframes[0])
dataframes[9] = dataframes[9].drop('C. SLL Crimes(Invoving Communication Devices as', axis=1)
```

```
# Now, the first DataFrame (dataframes[0]) will have separate columns for each value
print(dataframes[9])
```

```
dataframes[9].rename(columns={
    'Unnamed: 0': 'State/UT',
    'Unnamed: 2':'Total Cyber Crimes (IT Act+ IPC r/w IT Act + SLL r/w IT Act)'

}, inplace=True)
```

```
# Find the row index that contains the specified data
```

```

row_index_to_remove = dataframes[9][dataframes[9]['State/UT'] == 'UNION TERRITORIES'].index

# Drop the row using the row index
dataframes[9] = dataframes[9].drop(row_index_to_remove)

# Delete the 'Unnamed: 1' column
dataframes[9] = dataframes[9].drop('Unnamed: 1', axis=1)

```

```
dataframes[9]['State/UT'] = dataframes[9]['State/UT'].str.replace(r'\d+', '').str.strip()
```

```
dataframes[9] = dataframes[9].reset_index(drop=True)
```

		Unnamed: 0	Unnamed: 1	Unnamed: 2	Other SLL Crimes	\
6	1	Andhra Pradesh	NaN	1886	0	
7	2	Arunachal Pradesh	NaN	8	0	
8	3	Assam	NaN	2231	0	
9	4	Bihar	NaN	1050	0	
10	5	Chhattisgarh	NaN	175	0	
11	6	Goa	NaN	15	0	
12	7	Gujarat	NaN	784	2	
13	8	Haryana	NaN	564	0	
14	9	Himachal Pradesh	NaN	76	0	
15	10	Jammu & Kashmir	NaN	73	0	
16	11	Jharkhand	NaN	1095	0	
17	12	Karnataka	NaN	12020	1	
18	13	Kerala	NaN	307	5	
19	14	Madhya Pradesh	NaN	602	0	
20	15	Maharashtra	NaN	4967	0	
21	16	Manipur	NaN	4	0	
22	17	Meghalaya	NaN	89	0	
23	18	Mizoram	NaN	8	0	
24	19	Nagaland	NaN	2	0	
25	20	Odisha	NaN	1485	0	
26	21	Punjab	NaN	243	2	
27	22	Rajasthan	NaN	1762	0	
28	23	Sikkim	NaN	2	0	
29	24	Tamil Nadu	NaN	385	5	
30	25	Telangana	NaN	2691	0	
31	26	Tripura	NaN	20	0	
32	27	Uttar Pradesh	NaN	11416	3	
33	28	Uttarakhand	NaN	100	0	
34	29	West Bengal	NaN	335	4	
35		TOTAL STATE(S)	NaN	44395	22	
36		UNION TERRITORIES:	NaN	NaN	NaN	
37	30	A&N Islands	NaN	2	0	
38	31	Chandigarh	NaN	23	0	
39	32	D&N Haveli	NaN	0	0	
40	33	Daman & Diu	NaN	3	0	
41	34	Delhi	NaN	115	0	
42	35	Lakshadweep	NaN	4	0	
43	36	Puducherry	NaN	4	0	
44		TOTAL UT(S)	NaN	151	0	
45		TOTAL ALL INDIA	NaN	44546	22	

Total Offences under SLL

6	0
7	2
8	2
9	0
10	0
11	0
12	2
13	1
14	0
15	23
16	7
17	1
18	6
19	4
20	3

```
dataframes[9]
```

	State/UT	Total Cyber Crimes (IT Act+ IPC r/w IT Act + SLL r/w IT Act)	Other SLL Crimes	Total Offences under SLL
0	Andhra Pradesh	1886	0	0
1	Arunachal Pradesh	8	0	2
2	Assam	2231	0	2
3	Bihar	1050	0	0
4	Chhattisgarh	175	0	0
5	Goa	15	0	0
6	Gujarat	784	2	2
7	Haryana	564	0	1
8	Himachal Pradesh	76	0	0
9	Jammu & Kashmir	73	0	23
10	Jharkhand	1095	0	7
11	Karnataka	12020	1	1
12	Kerala	307	5	
13	Madhya Pradesh	602	0	4
14	Maharashtra	4967	0	3
15	Manipur	4	0	0
16	Meghalaya	89	0	0
17	Mizoram	8	0	0
18	Nagaland	2	0	0
19	Odisha	1485	0	0
20	Punjab	243	2	2
21	Rajasthan	1762	0	5
22	Sikkim	2	0	0
23	Tamil Nadu	385	5	13
24	Telangana	2691	0	3
25	Tripura	20	0	0
26	Uttar Pradesh	11416	3	3
27	Uttarakhand	100	0	0
28	West Bengal	335	4	6
29	TOTAL STATE(S)	44395	22	83
30	A&N Islands	2	0	0
31	Chandigarh	23	0	0

Concatenating all Dataframes into one Dataframe

... DataFrames View

```
for i in range(1, 10):
    dataframes[i] = dataframes[i].drop('State/UT', axis=1)
```

```
df_final = pd.concat(dataframes[:10], axis=1)
```

```
df_final
```

State/UT	Tampering computer source documents (Sec.65)	Computer Related Offences (Total)	Computer Related Offences (Sec.66) (Total)	Ransomware	a1)	a2)	Dishonestlyreceiving stolen computer resource or communication device (Sec.66B)	IdentityTheft(Sec.66C)	C) Che by com res (Sec
0 Andhra Pradesh	7	264	4	1	3		29		97
1 Arunachal Pradesh	0	1	0	0	0		0		1
2 Assam	5	1113	191	0	191		16		136
3 Bihar	0	24	0	0	0		0		15
4 Chhattisgarh	0	19	5	0	5		1		4
5 Goa	1	0	0	0	0		0		0
6 Gujarat	4	206	3	1	2		6		175
7 Haryana	2	195	39	0	39		11		29
8 Himachal Pradesh	0	25	2	1	1		1		8
9 Jammu & Kashmir	0	22	3	0	3		0		8
10 Jharkhand	0	1004	245	87	158		168		331
11 Karnataka	15	11700	134	15	119		28		10482
12 Kerala	1	90	13	1	12		6		21
13 Madhya Pradesh	0	277	17	12	5		1		71
14 Maharashtra	4	408	15	4	11		8		214

Checking null value counts

```
null_counts = df_final.isnull().sum()
print(null_counts)
```

State/UT	0
Tampering computer source documents (Sec.65)	0
Computer Related Offences (Total)	0
A) Computer Related Offences (Sec.66) (Total)	0
a1) Ransomware	0
a2) Offences other than Ransomware	0
B) Dishonestlyreceiving stolen computer resource or communication device (Sec.66B)	0
C) IdentityTheft(Sec.66C)	0
D) Cheating bypersonation by using computer resource (Sec.66D)	0
E) Violation of Privacy (Sec.66E)	0
Cyber Terrorism (Sec.66 F)	0
Publication/ transmission of obscene / sexually explicit act in electronic form (Total)	0
A) Publishing ortransmitting obscene material in Electronic Form	0
B) Publishing ortransmitting of material containing Sexually explicit act in electronic form (Sec.67A)	0
C) Publishing ortransmitting of material depicting children in Sexually explicit act in electronic form (Sec.67B)	0
D) Preservationand retention of information by intermediaries (Sec.67C)	0
E) Othersub-sections of Sec. 67 IT Act	0
Interception or Monitoring or decryption of Information (Sec.69)	0
Un-authorized access/attempts to access to protected computer system (Sec.70)	0
Abetment to Commit Offences (Sec.84 B)	0
Attempt to Commit Offences (Sec.84C)	0
Other Sections of IT Act	0
Total Offences under I.T. Act	0
Abetment of Suicide (Online) (Sec.305/306 IPC)	0
Cyber Stalking/ Bullying of Women/ Children (Sec.354D IPC)	0
Data theft (Sec.379 to 381)	0
Fraud (Sec.420 r/w Sec.465,468-471 IPC) (Total)	0
A) CreditCard/Debit Card	0
B) ATMs	0
C) Online Banking Fraud	0
D) OTP Frauds	0
E) Others	0
Cheating (Sec.420)	0
A) Currency(Sec.489A to 489E)	0
Forgery (Sec.465, 468 & 471)	0
Defamation/ Morphing (Sec.469 IPC r/w IPC and Indecent representation of women Act)	0
Fake Profile (r/w IPC/SLL)	0

Counterfeiting (Total)	0
Total Offences under IPC	0
B) Stamps(Sec.255)	0
Cyber Blackmailing/Threatening (Sec.506, 503, 384 IPC)	0
Fake News on Social Media (Sec.505)	0
Other Offences	0
Gambling Act (Online Gambling)	0
Lotteries Act (Online Lotteries)	0
Copy Right Act, 1957'	0
Trade Marks Act, 1999	0
Total Cyber Crimes (IT Act+ IPC r/w IT Act + SLL r/w IT Act)	0
Other SLL Crimes	0
Total Offences under SLL	0
dtype: int64	0

✓ Identifying missing values in the DataFrame:

```
missing_values = df_final.isnull().sum()
print(missing_values)
```

State/UT	0
Tampering computer source documents (Sec.65)	0
Computer Related Offences (Total)	0
A) Computer Related Offences (Sec.66) (Total)	0
a1) Ransomware	0
a2) Offences other than Ransomware	0
B) Dishonestly receiving stolen computer resource or communication device (Sec.66B)	0
C) IdentityTheft(Sec.66C)	0
D) Cheating by impersonation by using computer resource (Sec.66D)	0
E) Violation of Privacy (Sec.66E)	0
Cyber Terrorism (Sec.66 F)	0
Publication/ transmission of obscene / sexually explicit act in electronic form (Total)	0
A) Publishing ortransmitting obscene material in Electronic Form	0
B) Publishing ortransmitting of material containing Sexually explicit act in electronic form (Sec.67A)	0
C) Publishing ortransmitting of material depicting children in Sexually explicit act in electronic form (Sec.67B)	0
D) Preservationand retention of information by intermediaries (Sec.67C)	0
E) Othersubsections of Sec. 67 IT Act	0
Interception or Monitoring or decryption of Information (Sec.69)	0
Un-authorized access/attempts to access to protected computer system (Sec.70)	0
Abetment to Commit Offences (Sec.84 B)	0
Attempt to Commit Offences (Sec.84C)	0
Other Sections of IT Act	0
Total Offences under I.T. Act	0
Abetment of Suicide (Online) (Sec.305/306 IPC)	0
Cyber Stalking/ Bullying of Women/ Children (Sec.354D IPC)	0
Data theft (Sec.379 to 381)	0
Fraud (Sec.420 r/w Sec.465,468-471 IPC) (Total)	0
A) CreditCard/Debit Card	0
B) ATMs	0
C) Online Banking Fraud	0
D) OTP Frauds	0
E) Others	0
Cheating (Sec.420)	0
A) Currency(Sec.489A to 489E)	0
Forgery (Sec.465, 468 & 471)	0
Defamation/ Morphing (Sec.469 IPC r/w IPC and Indecent representation of women Act)	0
Fake Profile (r/w IPC/SLL)	0
Counterfeiting (Total)	0
Total Offences under IPC	0
B) Stamps(Sec.255)	0
Cyber Blackmailing/Threatening (Sec.506, 503, 384 IPC)	0
Fake News on Social Media (Sec.505)	0
Other Offences	0
Gambling Act (Online Gambling)	0
Lotteries Act (Online Lotteries)	0
Copy Right Act, 1957'	0
Trade Marks Act, 1999	0
Total Cyber Crimes (IT Act+ IPC r/w IT Act + SLL r/w IT Act)	0
Other SLL Crimes	0
Total Offences under SLL	0
dtype: int64	0

✓ Removing Duplicates

```
df_final.drop_duplicates(inplace=True)
```

```
df_final
```

State/UT	Tampering computer source documents (Sec.65)	Computer Related Offences (Total)	Computer Related Offences (Sec.66) (Total)	Ransomware	a1)	a2)	Dishonestlyreceiving stolen computer resource or communication device (Sec.66B)	IdentityTheft(Sec.66C)	C) Che by com res (Sec
0	Andhra Pradesh	7	264	4	1	3	29		97
1	Arunachal Pradesh	0	1	0	0	0	0		1
2	Assam	5	1113	191	0	191	16		136
3	Bihar	0	24	0	0	0	0		15
4	Chhattisgarh	0	19	5	0	5	1		4
5	Goa	1	0	0	0	0	0		0
6	Gujarat	4	206	3	1	2	6		175
7	Haryana	2	195	39	0	39	11		29
8	Himachal Pradesh	0	25	2	1	1	1		8
9	Jammu & Kashmir	0	22	3	0	3	0		8
10	Jharkhand	0	1004	245	87	158	168		331
11	Karnataka	15	11700	134	15	119	28		10482
12	Kerala	1	90	13	1	12	6		21
13	Madhya Pradesh	0	277	17	12	5	1		71
14	Maharashtra	4	408	15	4	11	8		214
15	Manipur	0	1	0	0	0	0		0
16	Meghalaya	0	72	1	0	1	0		27
17	Mizoram	0	5	0	0	0	0		3
18	Nagaland	0	2	0	0	0	0		1
19	Odisha	1	3	0	0	0	0		0
20	Punjab	1	25	1	0	1	2		10

Checking the datatype of all the columns

```
22    Tamil Nadu      2      05      20      12      10      1      22
column_data_types = df_final.dtypes
print(column_data_types)
```

State/UT	
Tampering computer source documents (Sec.65)	object
Computer Related Offences (Total)	object
A) Computer Related Offences (Sec.66) (Total)	object
a1) Ransomware	object
a2) Offences other than Ransomware	object
B) Dishonestlyreceiving stolen computer resource or communication device (Sec.66B)	object
C) IdentityTheft(Sec.66C)	object
D) Cheating bypersonation by using computer resource (Sec.66D)	object
E) Violation of Privacy (Sec.66E)	object
Cyber Terrorism (Sec.66 F)	object
Publication/ transmission of obscene / sexually explicit act in electronic form (Total)	object
A) Publishing ortransmitting obscene material in Electronic Form	object
B) Publishing ortransmitting of material containing Sexually explicit act in electronic form (Sec.67A)	object
C) Publishing ortransmitting of material depicting children in Sexually explicit act in electronic form (Sec.67B)	object
D) Preservationand retention of information by intermediaries (Sec.67C)	object
E) Othersubsections of Sec. 67 IT Act	object
Interception or Monitoring or decryption of Information (Sec.69)	object
Un-authorized access/attempts to access to protected computer system (Sec.70)	object
Abetment to Commit Offences (Sec.84 B)	object
Attempt to Commit Offences (Sec.84C)	object
Other Sections of IT Act	object
Total Offences under I.T. Act	int64
Abetment of Suicide (Online) (Sec.305/306 IPC)	object
Cyber Stalking/ Bullying of Women/ Children (Sec.354D IPC)	object

```

Data theft (Sec.379 to 381)                                     object
Fraud (Sec.420 r/w Sec.465,468-471 IPC) (Total)             object
A) CreditCard/Debit Card                                    object
B) ATMs                                                 object
C) Online Banking Fraud                                  object
D) OTP Frauds                                           object
E) Others                                              object
Cheating (Sec.420)                                         object
A) Currency(Sec.489A to 489E)                                int64
Forgery (Sec.465, 468 & 471)                                 object
Defamation/ Morphing (Sec.469 IPC r/w IPC and Indecent representation of women Act) object
Fake Profile (r/w IPC/SLL)                                   object
Counterfeiting (Total)                                      object
Total Offences under IPC                                    object
B) Stamps(Sec.255))                                       object
Cyber Blackmailing/Threatening (Sec.506,503,384 IPC)        object
Fake News on Social Media (Sec.505)                           object
Other Offences                                            object
Gambling Act (Online Gambling)                            object
Lotteries Act (Online Lotteries)                          object
Copy Right Act, 1957'                                     object
Trade Marks Act, 1999                                     object
Total Cyber Crimes (IT Act+ IPC r/w IT Act + SLL r/w IT Act) object
Other SLL Crimes                                         object
Total Offences under SLL                                 object
dtype: object

```

▼ Converting to numeric datatype

```

import pandas as pd

# Replace 'df_final' with the actual name of your DataFrame
for column in df_final.columns[1:]: # Start from the second column (excluding 'State/UT')
    df_final[column] = pd.to_numeric(df_final[column], errors='coerce')

```

```

column_data_types = df_final.dtypes
print(column_data_types)

State/UT                                         object
Tampering computer source documents (Sec.65)      int64
Computer Related Offences (Total)                  int64
A) Computer Related Offences (Sec.66) (Total)      int64
a1) Ransomware                                     int64
a2) Offences other than Ransomware                int64
B) Dishonestlyreceiving stolen computer resource or communication device (Sec.66B) int64
C) IdentityTheft(Sec.66C)                           int64
D) Cheating bypersonation by using computer resource (Sec.66D) int64
E) Violation of Privacy (Sec.66E)                  int64
Cyber Terrorism (Sec.66 F)                         int64
Publication/ transmission of obscene / sexually explicit act in electronic form (Total) int64
A) Publishing ortransmitting obscene material in Electronic Form int64
B) Publishing ortransmitting of material containing Sexually explicit act in electronic form (Sec.67A) int64
C) Publishing ortransmitting of material depicting children in Sexually explicit act in electronic form (Sec.67B) int64
D) Preservationand retention of information by intermediaries (Sec.67C) int64
E) Othersub_sections of Sec. 67 IT Act            int64
Interception or Monitoring or decryption of Information (Sec.69) int64
Un-authorized access/attempts to access to protected computer system (Sec.70) int64
Abetment to Commit Offences (Sec.84 B)             int64
Attempt to Commit Offences (Sec.84C)               int64
Other Sections of IT Act                           int64
Total Offences under I.T. Act                      int64
Abetment of Suicide (Online) (Sec.305/306 IPC)      int64
Cyber Stalking/ Bullying of Women/ Children (Sec.354D IPC) int64
Data theft (Sec.379 to 381)                         int64
Fraud (Sec.420 r/w Sec.465,468-471 IPC) (Total)   int64
A) CreditCard/Debit Card                           int64
B) ATMs                                             int64
C) Online Banking Fraud                          int64
D) OTP Frauds                                     int64
E) Others                                         int64
Cheating (Sec.420)                                int64
A) Currency(Sec.489A to 489E)                      int64
Forgery (Sec.465, 468 & 471)                      int64
Defamation/ Morphing (Sec.469 IPC r/w IPC and Indecent representation of women Act) int64
Fake Profile (r/w IPC/SLL)                        int64
Counterfeiting (Total)                           int64
Total Offences under IPC                         int64
B) Stamps(Sec.255))                             int64
Cyber Blackmailing/Threatening (Sec.506,503,384 IPC) int64
Fake News on Social Media (Sec.505)                int64
Other Offences                                     int64
Gambling Act (Online Gambling)                   int64

```

```

Lotteries Act (Online Lotteries)           int64
Copy Right Act, 1957'                    int64
Trade Marks Act, 1999                    int64
Total Cyber Crimes (IT Act+ IPC r/w IT Act + SLL r/w IT Act) int64
Other SLL Crimes                        int64
Total Offences under SLL                int64
dtype: object

```

✓ Saving the cleaned data

```
# Save the DataFrame as a CSV file
df_final.to_csv('finaldataframe.csv', index=False)
```

reading the saved final dataframe

```
# Replace 'your_saved_csv_file.csv' with the actual file path
file_path = 'finaldataframe.csv'
```

```
# Read the CSV file and store it in a DataFrame
import pandas as pd
df_final = pd.read_csv(file_path)
```

✓ Exploratory Data Analysis

```
import matplotlib.pyplot as plt
import seaborn as sns
```

✓ Univariate Analysis

Summary Statistics:

```
summary_stats = df_final.describe()
print(summary_stats)
```

	Tampering computer source documents (Sec.65) \		
count	39.000000		
mean	13.307692		
std	42.154574		
min	0.000000		
25%	0.000000		
50%	0.000000		
75%	2.500000		
max	173.000000		
	Computer Related Offences (Total) \		
count	39.000000		
mean	1816.307692		
std	5526.477679		
min	0.000000		
25%	2.500000		
50%	37.000000		
75%	270.500000		
max	23612.000000		
	A) Computer Related Offences (Sec.66) (Total) a1) Ransomware \		
count	39.000000	39.000000	
mean	343.615385	78.692308	
std	1134.884544	263.370877	
min	0.000000	0.000000	
25%	0.000000	0.000000	
50%	3.000000	0.000000	
75%	20.500000	2.000000	
max	4467.000000	1023.000000	
	a2) Offences other than Ransomware \		
count	39.000000		
mean	264.923077		
std	871.797278		
min	0.000000		
25%	0.000000		
50%	3.000000		

```

75%          17.000000
max          3444.000000

B) Dishonestly receiving stolen computer resource or communication device (Sec.66B) \
count        39.000000
mean         42.923077
std          129.552953
min          0.000000
25%          0.000000
50%          1.000000
75%          8.000000
max          558.000000

C) IdentityTheft(Sec.66C) \
count        39.000000
mean         942.692308
std          3143.927080
min          0.000000
25%          1.000000
50%          11.000000
75%          84.000000

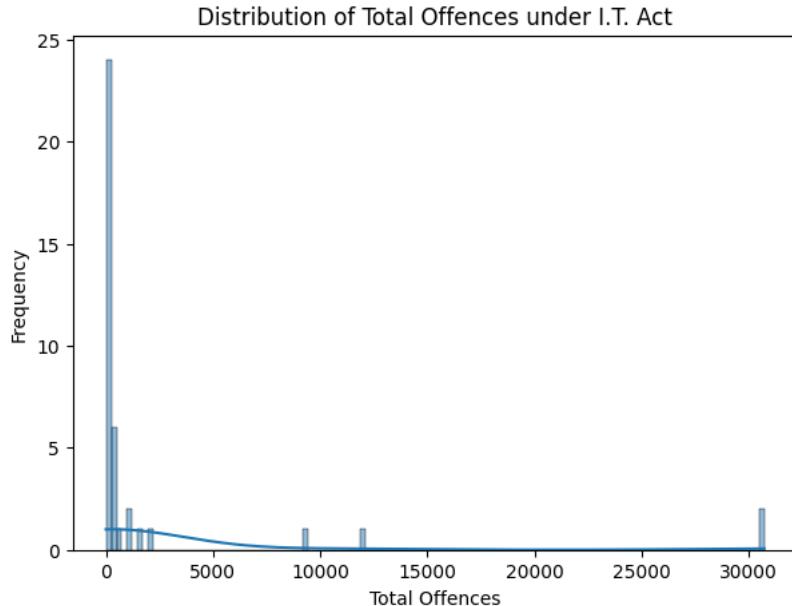
```

Distribution Plots:

```

plt.figure(figsize=(7, 5))
sns.histplot(df_final["Total Offences under I.T. Act"], kde=True)
plt.title("Distribution of Total Offences under I.T. Act")
plt.xlabel("Total Offences")
plt.ylabel("Frequency")
plt.show()

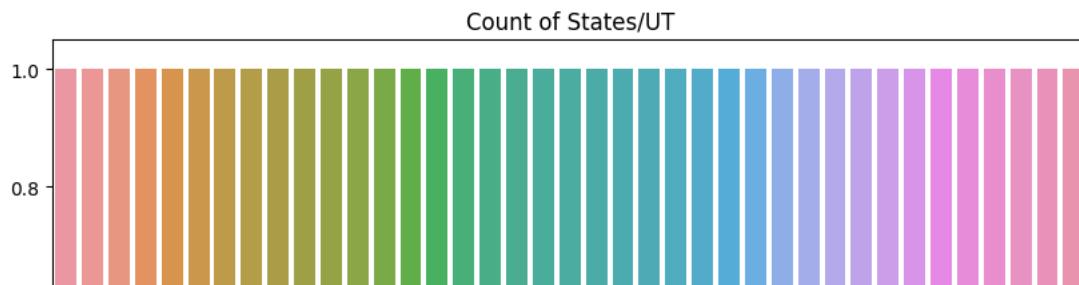
```

**Count Plots:**

```

plt.figure(figsize=(10, 6))
sns.countplot(x="State/UT", data=df_final)
plt.xticks(rotation=90)
plt.title("Count of States/UT")
plt.show()

```



Count Plot for Categorical Columns

```

plt.figure(figsize=(10, 6))
sns.countplot(data=df_final, x="Abetment of Suicide (Online) (Sec.305/306 IPC)")
plt.title("Count Plot for Abetment of Suicide (Online) (Sec.305/306 IPC)")
plt.xticks(rotation=90)
plt.show()

```

Count Plot for Abetment of Suicide (Online) (Sec.305/306 IPC)



Distribution of Total Cyber Crimes

```

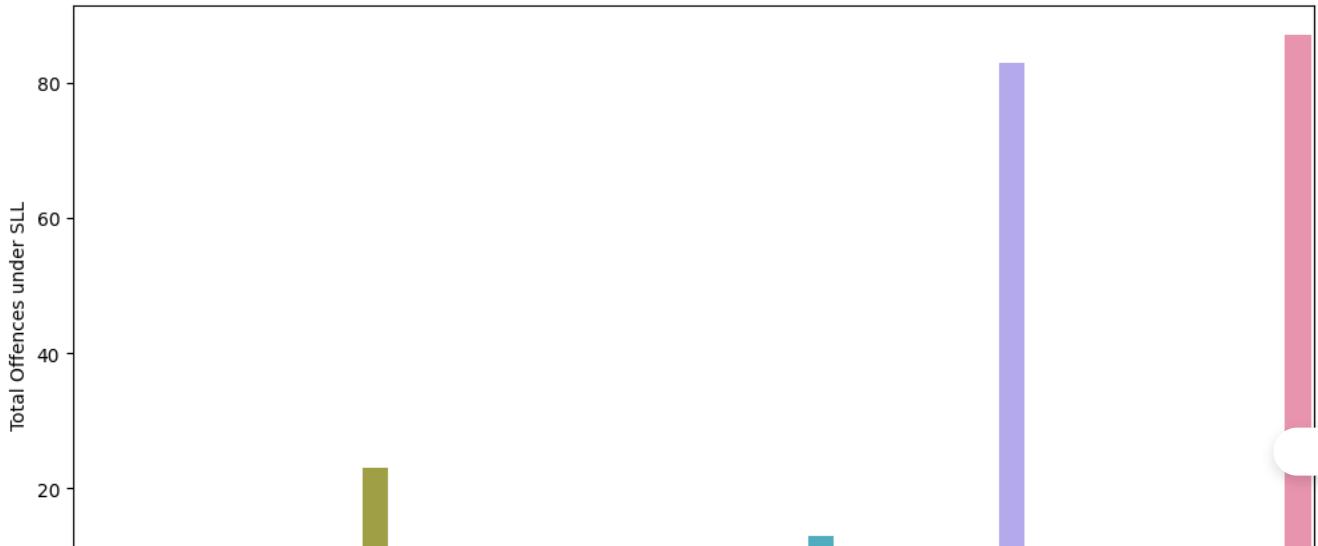
plt.figure(figsize=(10, 6))
sns.histplot(df_final["Total Cyber Crimes (IT Act+ IPC r/w IT Act + SLL r/w IT Act)"], kde=True)
plt.title("Distribution of Total Cyber Crimes")
plt.xlabel("Total Cyber Crimes")
plt.ylabel("Frequency")
plt.show()

```

Bar Plot for Total Offences under SLL

```
plt.figure(figsize=(12, 6))
sns.barplot(data=df_final, x="State/UT", y="Total Offences under SLL")
plt.title("Bar Plot for Total Offences under SLL")
plt.xticks(rotation=90)
plt.show()
```

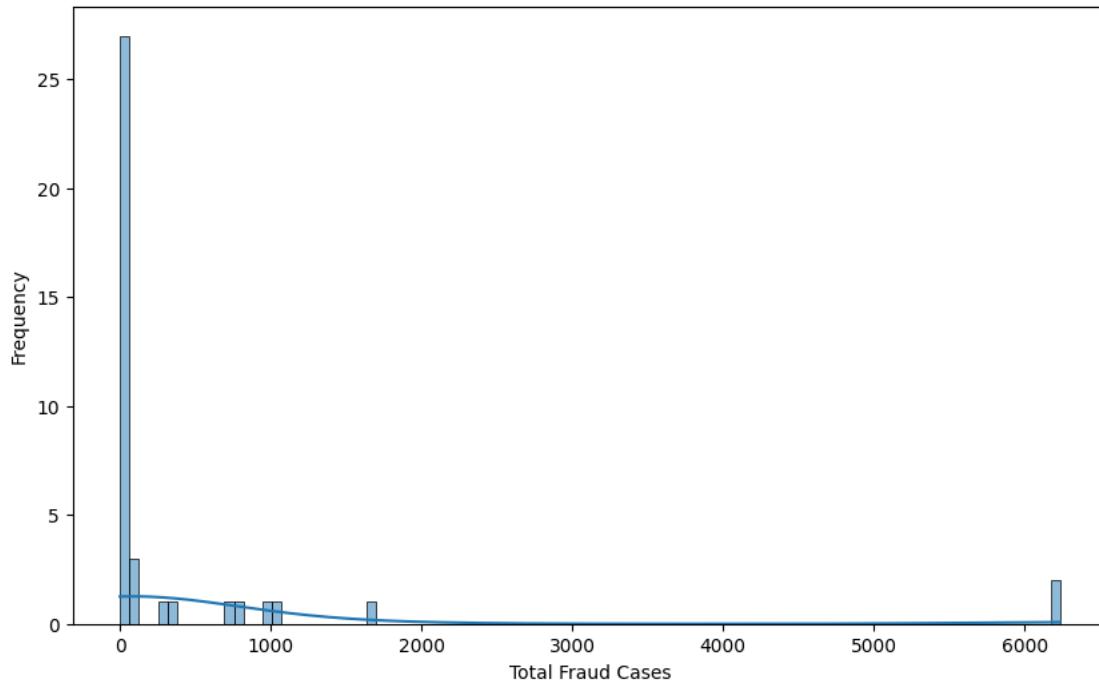
Bar Plot for Total Offences under SLL



Histogram for Fraud Cases

```
plt.figure(figsize=(10, 6))
sns.histplot(df_final["Fraud (Sec.420 r/w Sec.465, 468-471 IPC) (Total)"], kde=True)
plt.title("Distribution of Fraud Cases")
plt.xlabel("Total Fraud Cases")
plt.ylabel("Frequency")
plt.show()
```

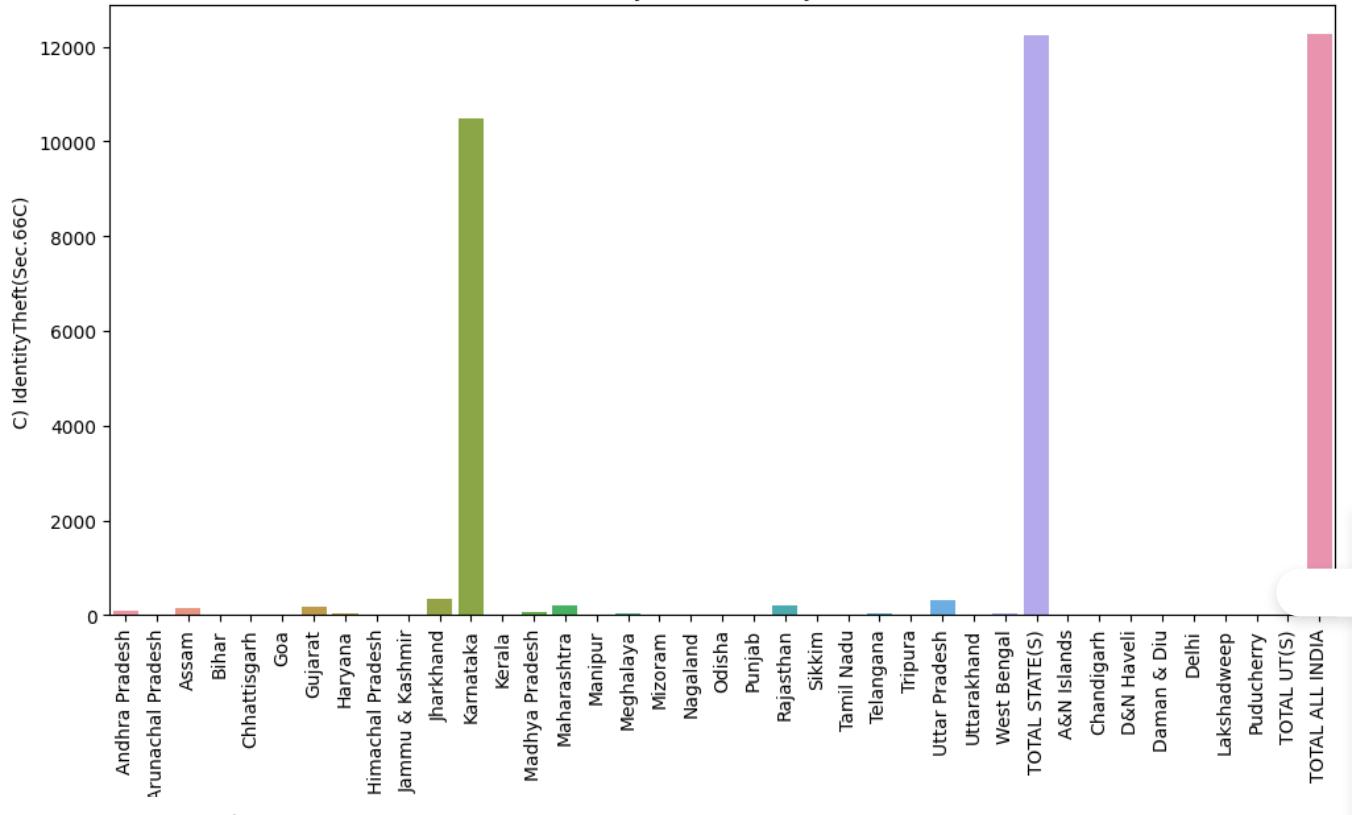
Distribution of Fraud Cases



Bar Plot for Identity Theft

```
plt.figure(figsize=(12, 6))
sns.barplot(data=df_final, x="State/UT", y="C) IdentityTheft(Sec.66C)")
plt.title("Identity Theft Cases by State")
plt.xticks(rotation=90)
plt.show()
```

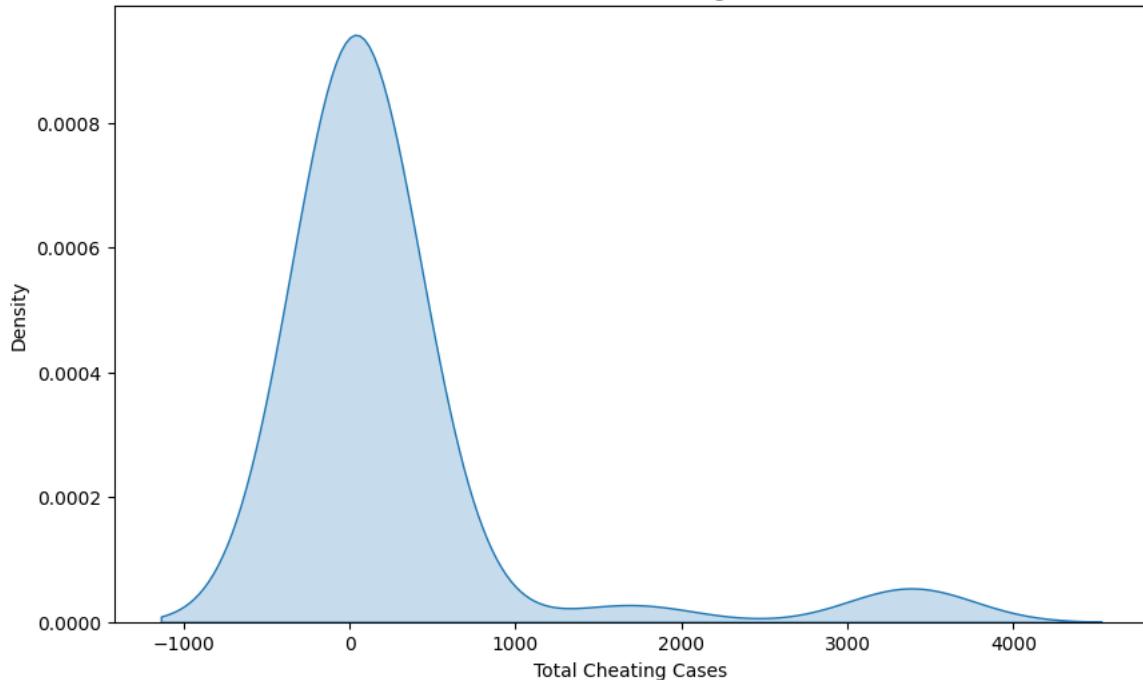
Identity Theft Cases by State



Kernel Density Estimate Plot for Cheating Cases

```
plt.figure(figsize=(10, 6))
sns.kdeplot(df_final["Cheating ( Sec.420)"], fill=True)
plt.title("Distribution of Cheating Cases")
plt.xlabel("Total Cheating Cases")
plt.ylabel("Density")
plt.show()
```

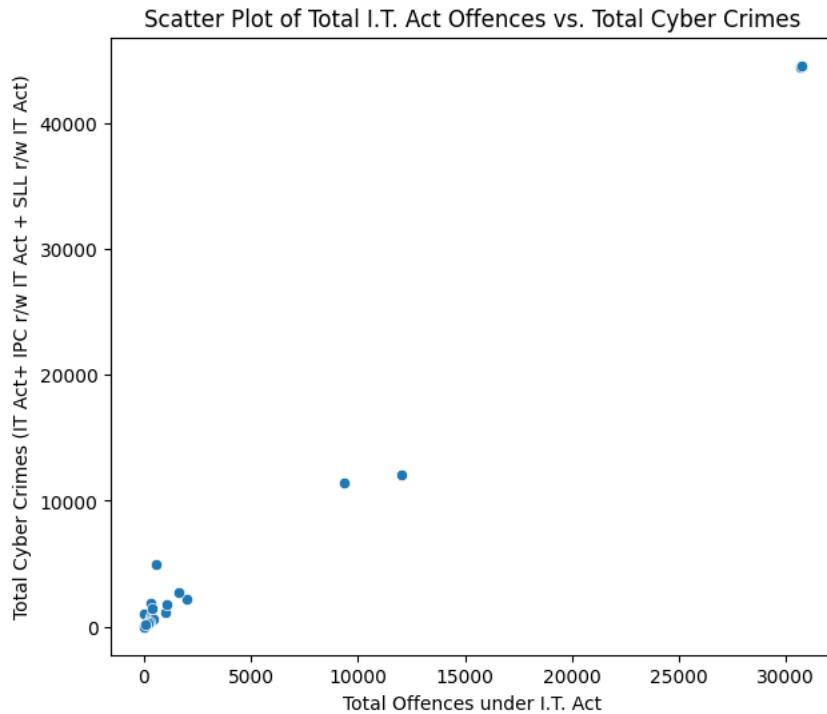
Distribution of Cheating Cases



❖ Bivariate Analysis

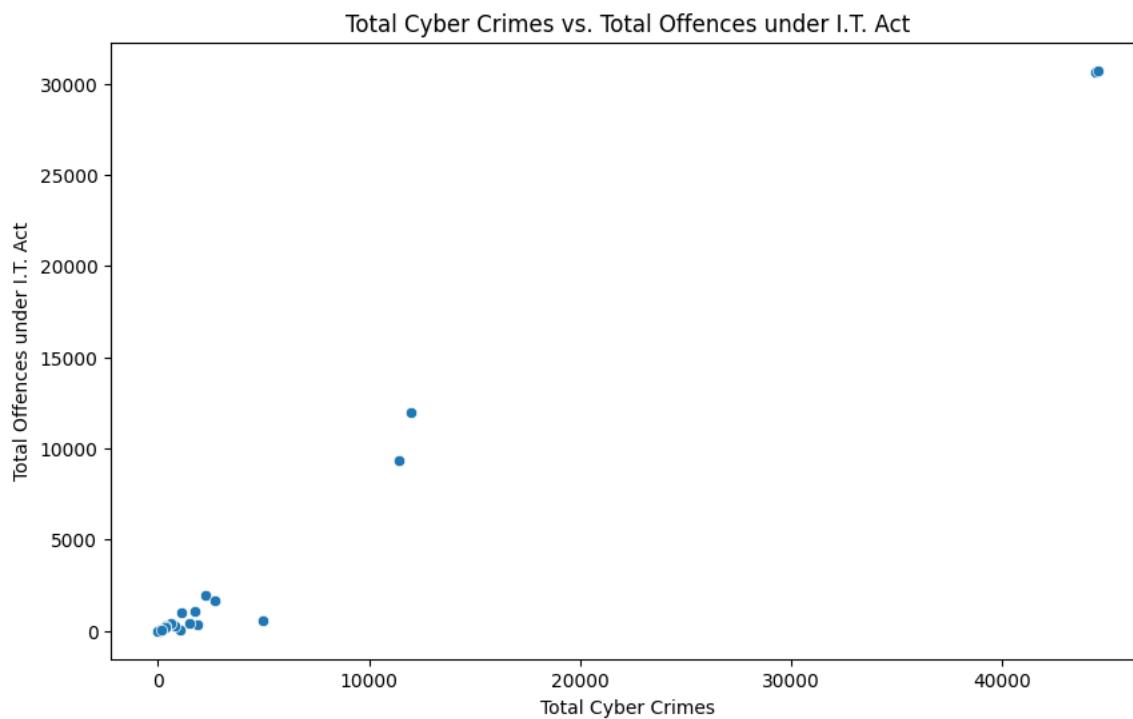
Scatter Plots:

```
plt.figure(figsize=(7, 6))
sns.scatterplot(x="Total Offences under I.T. Act", y="Total Cyber Crimes (IT Act+ IPC r/w IT Act + SLL r/w IT Act)", data=df_final)
plt.title("Scatter Plot of Total I.T. Act Offences vs. Total Cyber Crimes")
plt.show()
```



Scatter Plot for Total Cyber Crimes vs. Total Offences under I.T. Act

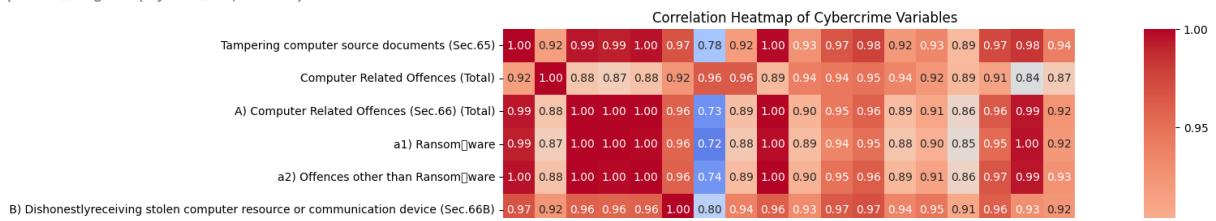
```
plt.figure(figsize=(10, 6))
sns.scatterplot(data=df_final, x="Total Cyber Crimes (IT Act+ IPC r/w IT Act + SLL r/w IT Act)", y="Total Offences under I.T. Act")
plt.title("Total Cyber Crimes vs. Total Offences under I.T. Act")
plt.xlabel("Total Cyber Crimes")
plt.ylabel("Total Offences under I.T. Act")
plt.show()
```



Correlation Heatmap:

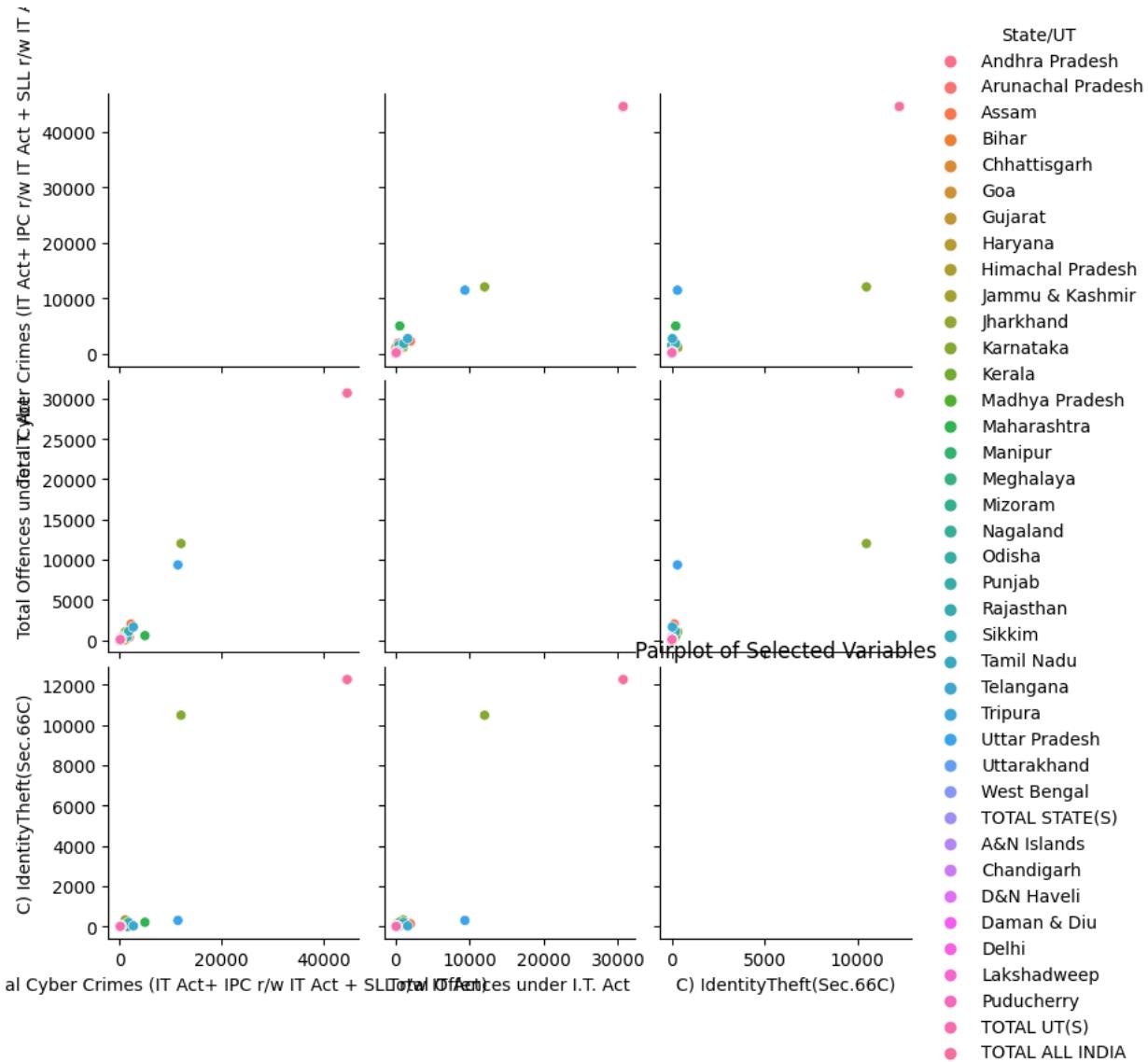
```
corr_matrix = df_final.iloc[:, 1:20].corr()
plt.figure(figsize=(12, 10))
sns.heatmap(corr_matrix, annot=True, cmap="coolwarm", fmt=".2f")
plt.title("Correlation Heatmap of Cybercrime Variables")
plt.show()
```

```
/usr/local/lib/python3.10/dist-packages/seaborn/utils.py:80: UserWarning: Glyph 2 (o) missing from current font.
  fig.canvas.draw()
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 2 (o) missing from current font.
  fig.canvas.print_figure(bytes_io, **kw)
```



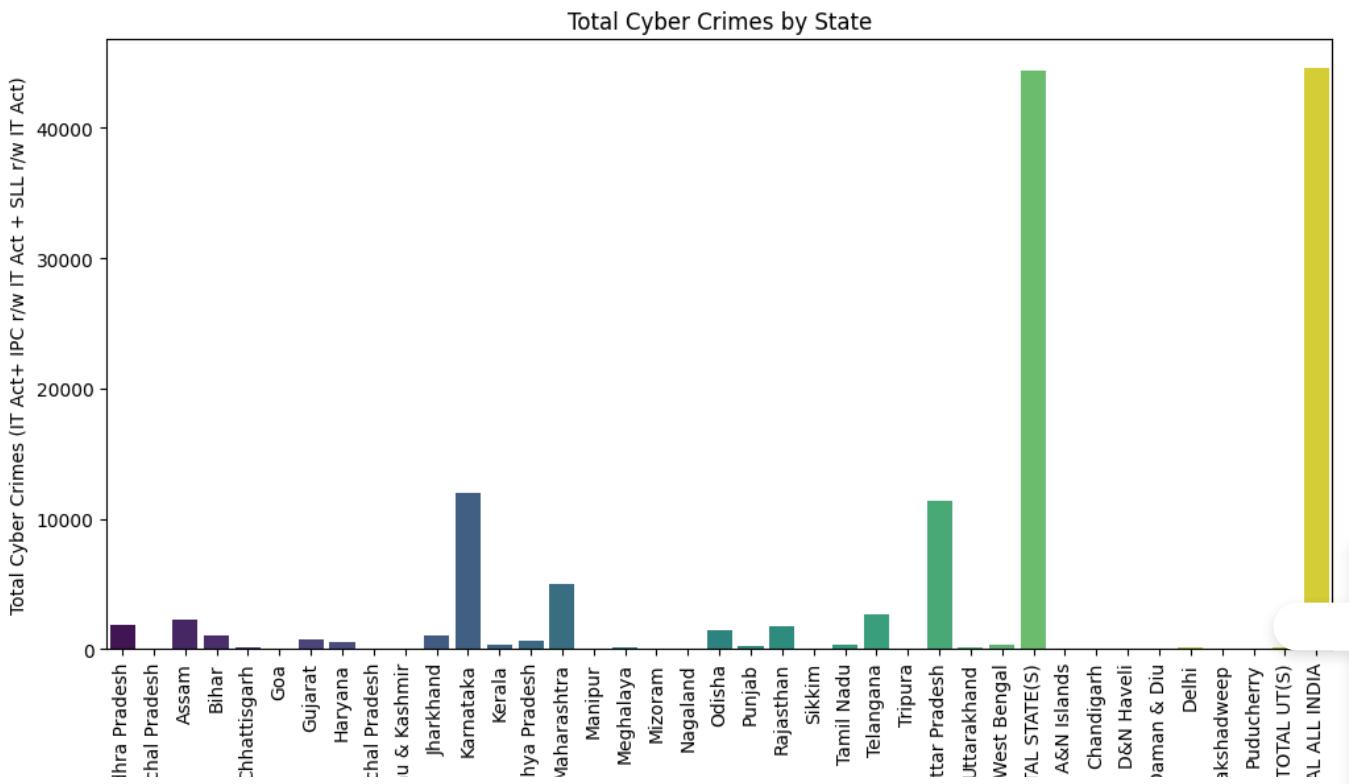
Pairplot for Select Columns:

```
sns.pairplot(df_final, vars=["Total Cyber Crimes (IT Act+ IPC r/w IT Act + SLL r/w IT Act)", "Total Offences under I.T. Act", "C) IdentityTheft(Sec.66C)"])
plt.title("Pairplot of Selected Variables")
plt.show()
```



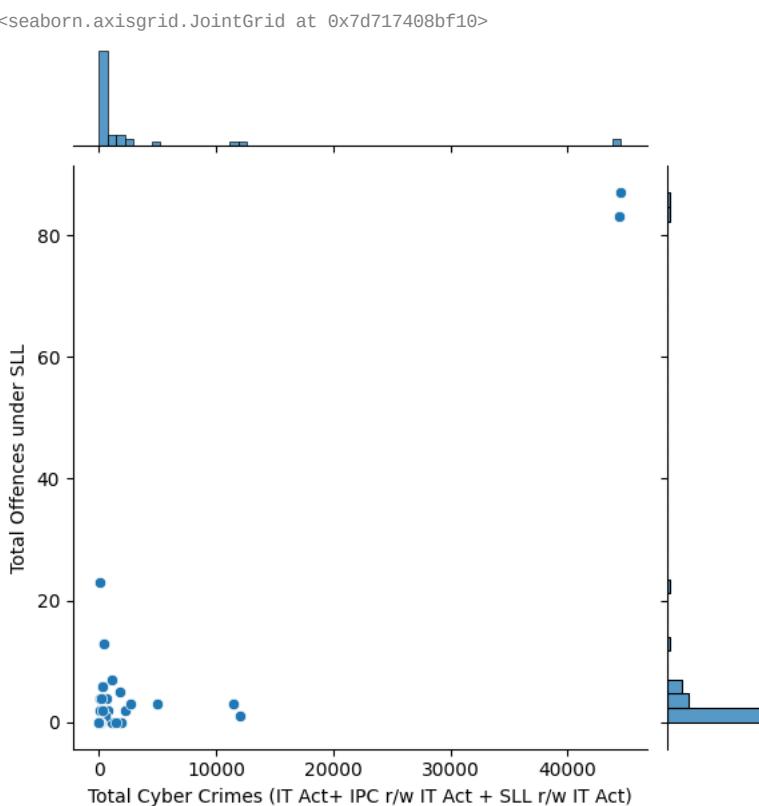
Bar Plot: Cyber Crimes by State

```
plt.figure(figsize=(12, 6))
sns.barplot(data=df_final, x="State/UT", y="Total Cyber Crimes (IT Act+ IPC r/w IT Act + SLL r/w IT Act)", palette="viridis")
plt.title("Total Cyber Crimes by State")
plt.xticks(rotation=90)
plt.show()
```



Joint Plot: Total Cyber Crimes vs. Total Offences under SLL

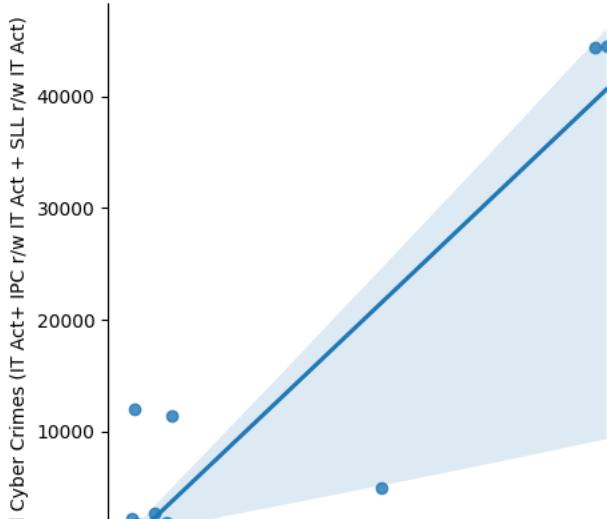
```
sns.jointplot(data=df_final, x="Total Cyber Crimes (IT Act+ IPC r/w IT Act + SLL r/w IT Act)", y="Total Offences under SLL", kind='
```



Regression Plot: Cyber Stalking/ Bullying vs. Total Cyber Crimes

```
sns.lmplot(data=df_final, x="Cyber Stalking/ Bullying of Women/ Children (Sec.354D IPC)", y="Total Cyber Crimes (IT Act+ IPC r/w I"
```

```
<seaborn.axisgrid.FacetGrid at 0x7d713763fb50>
```



Stacked Bar Plot: Cybercrime Types by State

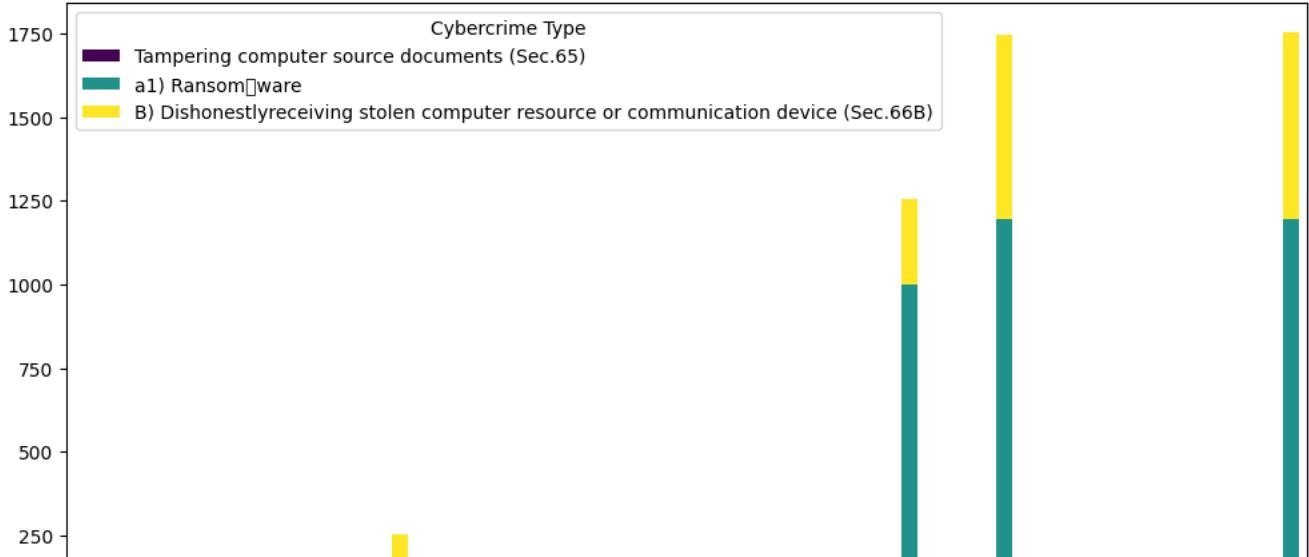
```
0 100 200 300 400 500 600 700 800
```

```
cybercrime_types = ["Tampering computer source documents (Sec.65)", "a1) Ransomware", "B) Dishonestlyreceiving stolen computer resource or communication device (Sec.66B)"]
df_cybercrime_types = df_final[cybercrime_types]
```

```
plt.figure(figsize=(12, 6))
df_cybercrime_types.plot(kind="bar", stacked=True, colormap="viridis", ax=plt.gca())
plt.title("Cybercrime Types by State")
plt.xticks(range(len(df_final["State/UT"])), df_final["State/UT"], rotation=90)
plt.legend(title="Cybercrime Type")
plt.show()
```

```
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 2 (◐) missing from current font.
  fig.canvas.print_figure(bytes_io, **kw)
```

Cybercrime Types by State



```
pip install geopandas pandas matplotlib
```

```
Requirement already satisfied: geopandas in /usr/local/lib/python3.10/dist-packages (0.13.2)
Requirement already satisfied: pandas in /usr/local/lib/python3.10/dist-packages (1.5.3)
Requirement already satisfied: matplotlib in /usr/local/lib/python3.10/dist-packages (3.7.1)
Requirement already satisfied: fiona>=1.8.19 in /usr/local/lib/python3.10/dist-packages (from geopandas) (1.9.5)
Requirement already satisfied: packaging in /usr/local/lib/python3.10/dist-packages (from geopandas) (23.2)
Requirement already satisfied: pyproj>=3.0.1 in /usr/local/lib/python3.10/dist-packages (from geopandas) (3.6.1)
Requirement already satisfied: shapely>=1.7.1 in /usr/local/lib/python3.10/dist-packages (from geopandas) (2.0.2)
Requirement already satisfied: python-dateutil>=2.8.1 in /usr/local/lib/python3.10/dist-packages (from pandas) (2.8.2)
Requirement already satisfied: pytz>=2020.1 in /usr/local/lib/python3.10/dist-packages (from pandas) (2023.3.post1)
Requirement already satisfied: numpy>=1.21.0 in /usr/local/lib/python3.10/dist-packages (from pandas) (1.23.5)
Requirement already satisfied: contourpy>=1.0.1 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (1.1.1)
Requirement already satisfied: cycler>=0.10 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (0.12.1)
Requirement already satisfied: fonttools>=4.22.0 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (4.43.1)
Requirement already satisfied: kiwisolver>=1.0.1 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (1.4.5)
Requirement already satisfied: pillow>=6.2.0 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (9.4.0)
Requirement already satisfied: pyparsing>=2.3.1 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (3.1.1)
Requirement already satisfied: attrs>=19.2.0 in /usr/local/lib/python3.10/dist-packages (from fiona>=1.8.19->geopandas) (23.1.0)
Requirement already satisfied: certifi in /usr/local/lib/python3.10/dist-packages (from fiona>=1.8.19->geopandas) (2023.7.22)
```

```
Requirement already satisfied: click~=8.0 in /usr/local/lib/python3.10/dist-packages (from fiona>=1.8.19->geopandas) (8.1.7)
Requirement already satisfied: click-plugins>=1.0 in /usr/local/lib/python3.10/dist-packages (from fiona>=1.8.19->geopandas) (:)
Requirement already satisfied: cligj>=0.5 in /usr/local/lib/python3.10/dist-packages (from fiona>=1.8.19->geopandas) (0.7.2)
Requirement already satisfied: six in /usr/local/lib/python3.10/dist-packages (from fiona>=1.8.19->geopandas) (1.16.0)
Requirement already satisfied: setuptools in /usr/local/lib/python3.10/dist-packages (from fiona>=1.8.19->geopandas) (67.7.2)
```

df_final

State/UT	Tampering computer source documents (Sec.65)	Computer Related Offences (Total)	Computer Related Offences (Sec.66)	Ransomware	a1)	a2)	Dishonestly receiving stolen computer other than Ransomware	receiving resource or communication device	B)	C)	D) Che by com res (Sec
										IdentityTheft(Sec.66C)	

▼ Multivariate Analysis:

Arunachal

Pairplot



```
import seaborn as sns
```

```
# Select a subset of states for the pair plot (e.g., the first 10 states)
subset_states = df_final['State/UT'].unique()[:10]
```

```
# Filter the DataFrame to include only these states
df_subset = df_final[df_final['State/UT'].isin(subset_states)]
```

```
# Create the pair plot
columns_to_plot = df_subset[['State/UT', 'Tampering computer source documents (Sec.65)', 'Cyber Terrorism (Sec.66 F)', 'Total Offences', 'Ransomware']]
sns.pairplot(columns_to_plot, hue='State/UT', markers=["o", "s", "D"])
```

```
/usr/local/lib/python3.10/dist-packages/seaborn/axisgrid.py:1609: UserWarning:
The markers list has fewer values (3) than needed (10) and will cycle, which may produce an uninterpretable plot.
  func(x=x, y=y, **kwargs)
/usr/local/lib/python3.10/dist-packages/seaborn/axisgrid.py:1609: UserWarning:
The markers list has fewer values (3) than needed (10) and will cycle, which may produce an uninterpretable plot.
  func(x=x, y=y, **kwargs)
/usr/local/lib/python3.10/dist-packages/seaborn/axisgrid.py:1609: UserWarning:
The markers list has fewer values (3) than needed (10) and will cycle, which may produce an uninterpretable plot.
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/usr/local/lib/python3.10/dist-packages/seaborn/axisgrid.py:1609: UserWarning:
The markers list has fewer values (3) than needed (10) and will cycle, which may produce an uninterpretable plot.
  func(x=x, y=y, **kwargs)
/usr/local/lib/python3.10/dist-packages/seaborn/axisgrid.py:1609: UserWarning:
The markers list has fewer values (3) than needed (10) and will cycle, which may produce an uninterpretable plot.
  func(x=x, y=y, **kwargs)
/usr/local/lib/python3.10/dist-packages/seaborn/axisgrid.py:1609: UserWarning:
The markers list has fewer values (3) than needed (10) and will cycle, which may produce an uninterpretable plot.
  func(x=x, y=y, **kwargs)
/usr/local/lib/python3.10/dist-packages/seaborn/axisgrid.py:1609: UserWarning:
The markers list has fewer values (3) than needed (10) and will cycle, which may produce an uninterpretable plot.
  func(x=x, y=y, **kwargs)
/usr/local/lib/python3.10/dist-packages/seaborn/axisgrid.py:1609: UserWarning:
The markers list has fewer values (3) than needed (10) and will cycle, which may produce an uninterpretable plot.
  func(x=x, y=y, **kwargs)
/usr/local/lib/python3.10/dist-packages/seaborn/axisgrid.py:1609: UserWarning:
The markers list has fewer values (3) than needed (10) and will cycle, which may produce an uninterpretable plot.
  func(x=x, y=y, **kwargs)
/usr/local/lib/python3.10/dist-packages/seaborn/axisgrid.py:1609: UserWarning:
The markers list has fewer values (3) than needed (10) and will cycle, which may produce an uninterpretable plot.
  func(x=x, y=y, **kwargs)
/usr/local/lib/python3.10/dist-packages/seaborn/axisgrid.py:1609: UserWarning:
The markers list has fewer values (3) than needed (10) and will cycle, which may produce an uninterpretable plot.
  func(x=x, y=y, **kwargs)
/usr/local/lib/python3.10/dist-packages/seaborn/axisgrid.py:1609: UserWarning:
The markers list has fewer values (3) than needed (10) and will cycle, which may produce an uninterpretable plot.
  func(x=x, y=y, **kwargs)
<seaborn.axisgrid.PairGrid at 0x7f2eaa88f8e0>
```



Scatterplot Matrix:

```
import seaborn as sns
import matplotlib.pyplot as plt

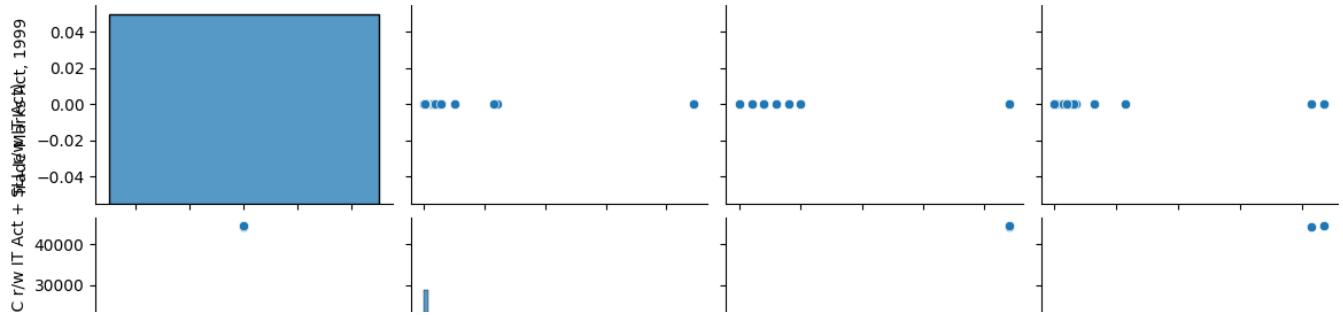
# Select the columns from the last part of the DataFrame (adjust column selection as needed)
columns_to_plot = df_final.iloc[:, -4:] # Select the last 4 columns or adjust as per your preference

# Create the scatterplot matrix
scatterplot_matrix = sns.pairplot(columns_to_plot, height=2, aspect=1.5)

# Add a title to the scatterplot matrix
plt.suptitle("Scatterplot Matrix", y=1.02)

# Show the plot
plt.show()
```

Scatterplot Matrix

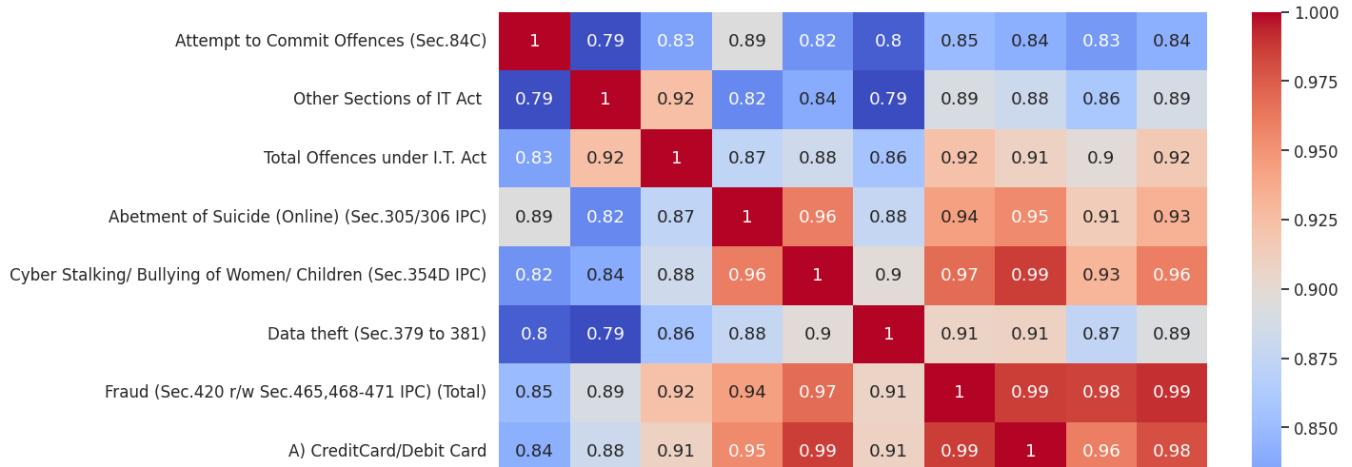


Heatmap:

```
T ~~~~~ | - | - | - | -
```

```
import seaborn as sns  
import matplotlib.pyplot as plt
```

```
# Select the middle 10 columns (adjust as needed)  
middle_columns = df_final.iloc[:, 20:30]  
  
# Calculate the correlation matrix for the selected columns  
correlation_matrix = middle_columns.corr()  
  
# Set the figure size  
plt.figure(figsize=(12, 8))  
  
# Create the heatmap  
sns.heatmap(correlation_matrix, annot=True, cmap="coolwarm")  
  
# Display the plot  
plt.show()
```

**3D Scatterplot:**

```
from mpl_toolkits.mplot3d import Axes3D
```

```
# Replace these column names with the ones you want to plot
x_column = 'Tampering computer source documents (Sec.65)'
y_column = 'Computer Related Offences (Total)'
z_column = 'A) Computer Related Offences (Sec.66) (Total)'
```

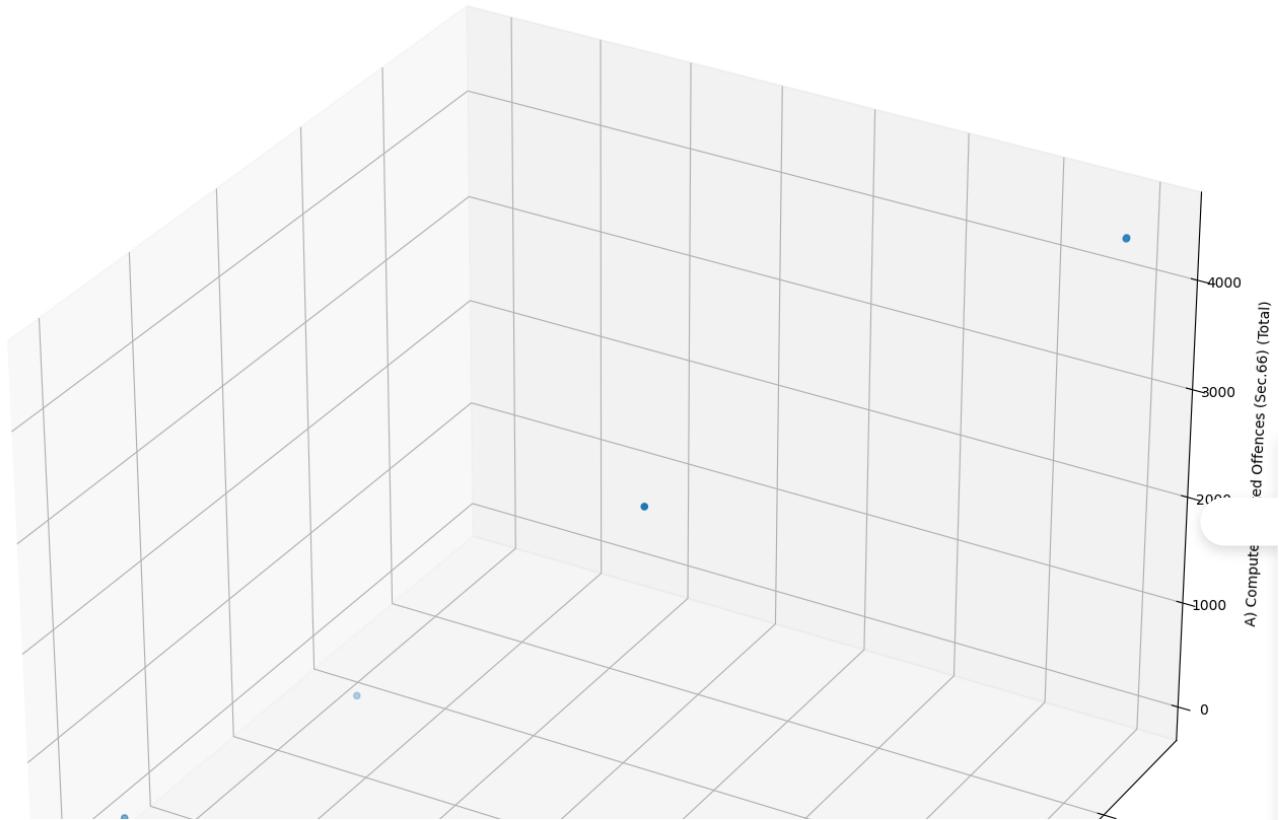
```
fig = plt.figure(figsize=(17,17))
ax = fig.add_subplot(111, projection='3d')
scatter = ax.scatter(df_final[x_column], df_final[y_column], df_final[z_column])

ax.set_xlabel(x_column, labelpad=10)
ax.set_ylabel(y_column, labelpad=10)
ax.set_zlabel(z_column, labelpad=10)
```

```
# Adjust the rotation of the labels for better visibility
ax.xaxis.label.set_rotation(15)
ax.yaxis.label.set_rotation(45)
ax.zaxis.label.set_rotation(45)
```

```
# Set additional customization options if needed
```

```
plt.show()
```

**Parallel Coordinates Plot:**

```

import matplotlib.pyplot as plt
import pandas as pd
from pandas.plotting import parallel_coordinates

# Define the columns to be used in the Parallel Coordinates Plot
columns_to_plot = [
    'A) Computer Related Offences (Sec.66) (Total)',
    'C) IdentityTheft(Sec.66C)',
    'Cyber Terrorism (Sec.66 F)',
    'Total Offences under I.T. Act',
    'Data theft (Sec.379 to 381)',
]

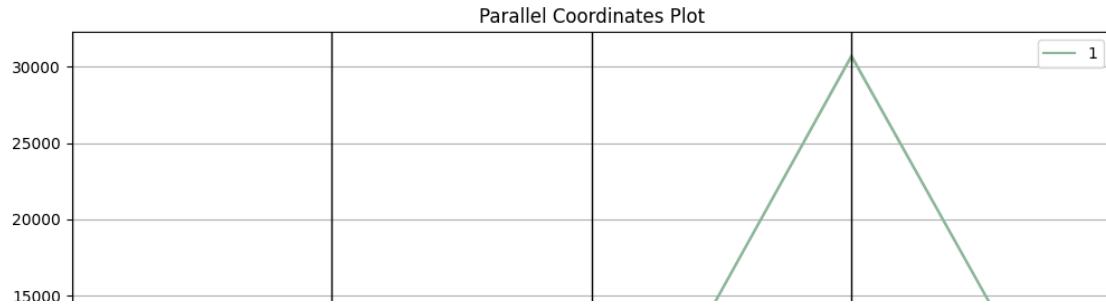
# Create a dummy class column with the same value for all rows
df_final['Class'] = 1

plt.figure(figsize=(12, 6))
parallel_coordinates(df_final[['Class'] + columns_to_plot], 'Class')

plt.title("Parallel Coordinates Plot")
plt.show()

# Remove the dummy class column from the DataFrame
df_final.drop('Class', axis=1, inplace=True)

```



Radar Chart:



```
from math import pi
import numpy as np

# Categories and values
categories = list(df_final.columns[1:6])
N = len(categories)

values = df_final.loc[0][1:6].values.tolist()
values += values[:1]

angles = [n / float(N) * 2 * pi for n in range(N)]
angles += angles[:1]

# Create a radar chart
plt.figure(figsize=(8, 8))
ax = plt.subplot(111, polar=True)
plt.xticks(angles[:-1], categories, color='Darkblue', size=12)
ax.set_rlabel_position(0)
plt.yticks(np.arange(0, 4001, 1000), ["0", "1000", "2000", "3000", "4000"], color="grey", size=10)
plt.ylim(0, 4000)
ax.fill(angles, values, 'b', alpha=0.1)

plt.show()
```

