Crimes against women in India

Analyzing different crimes against women in India in the span of year 2001-2014.

Motivation Behind Choosing Crimes against women in India data

Violence against women and girls is one of the most systematic and widespread human rights violations.The Main aim of working on this project is to reflect the situation of women in our society and raise concern about this matter.

Dataset Details

This project contains the data record of all types of crime against women in india in the span of year 2001-2014.Some crimes that are included are Rape, Kidnapping and Abduction, Dowry Deaths etc. I have taken this dataset from Kaggle (https://www.kaggle.com/datasets/greeshmagirish/crime-against-women-20012014-india). I will analyse this data and try to find different aspect of it by using Python libraries Pandas,Matplotlib and Seaborn.

As a first step, let's upload our Jupyter notebook to Jovian.ml.

```
!pip install jovian --upgrade --quiet
```

```
## Execute this to save new versions of the notebook
import jovian
jovian.commit(project = "Crimes_against_women_in_India")
```

Importing Data

Let's import all the libraries that we are going to use in this project.

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

sns.set_style('darkgrid')
matplotlib.rcParams['font.size'] = 14
matplotlib.rcParams['figure.figsize'] = (9,5)
matplotlib.rcParams['figure.facecolor'] = '#00000000'
```

Let's download the dataset from Koggle by using opendatasets and then read the file.

```
!pip install jovian opendatasets --upgrade --quiet
```

```
dataset_url = 'https://www.kaggle.com/datasets/greeshmagirish/crime-against-women-20012
import opendatasets as od
od.download(dataset_url)
```

```
Skipping, found downloaded files in "./crime-against-women-20012014-india" (use
force=True to force download)
```

Let's read the CSV file.

```
crime_df = pd.read_csv('crimes_against_women_2001-2014.csv')
```

```
crime_df
```

	Unnamed: 0	STATE/UT	DISTRICT	Year	Rape	Kidnapping and Abduction	Dowry Deaths	Assault on women with intent to outrage her modesty	Insult to modesty of Women	Cruelty by Husband or his Relatives	Impo
0	0	ANDHRA PRADESH	ADILABAD	2001	50	30	16	149	34	175	
1	1	ANDHRA PRADESH	ANANTAPUR	2001	23	30	7	118	24	154	
2	2	ANDHRA PRADESH	CHITTOOR	2001	27	34	14	112	83	186	
3	3	ANDHRA PRADESH	CUDDAPAH	2001	20	20	17	126	38	57	
4	4	ANDHRA PRADESH	EAST GODAVARI	2001	23	26	12	109	58	247	
...	...	...	...	...	...	...	...	...	...	...	
10672	832	Lakshadweep	Lakshadweep	2014	1	0	0	1	2	0	
10673	833	Lakshadweep	Total District(s)	2014	1	0	0	1	2	0	
10674	834	Puducherry	Karaikal	2014	3	1	0	12	1	1	
10675	835	Puducherry	Puducherry	2014	7	6	1	20	7	3	
10676	836	Puducherry	Total District(s)	2014	10	7	1	32	8	4	

10677 rows × 11 columns

Let us find out the number of rows and column of the particular dataset

```
crime_df.shape
```

```
(10677, 11)
```

Data Preparation and Cleaning

To start with the very basic of data cleaning, let's find out if any of the columns have any Null or missing values

```
overall_crime = crime_df.isna().sum()
```

```
overall_crime
```

```
Unnamed: 0                                                0
STATE/UT                                                  0
DISTRICT                                                  0
Year                                                      0
Rape                                                      0
Kidnapping and Abduction                                  0
Dowry Deaths                                              0
Assault on women with intent to outrage her modesty       0
Insult to modesty of Women                                0
Cruelty by Husband or his Relatives                       0
Importation of Girls                                      0
dtype: int64
```

None of the column has any Null values.

Now let's find the total number of 'Unique' districts, where the crimes have been committed.

```
DISTRICT = len(crime_df.DISTRICT.unique())
```

```
DISTRICT
```

```
1605
```

But there are 766 districts in India, in total, which means there is messy or false datas in a huge amount, in this case, we better drop the column "District" and also "Unnamed: 0", as it is of no use, in our data analysis process.

```
crime_df.drop(['DISTRICT', 'Unnamed: 0'], axis = 1, inplace=True)
```

```
crime_df
```

	STATE/UT	Year	Rape	Kidnapping and Abduction	Dowry Deaths	Assault on women with intent to outrage her modesty	Insult to modesty of Women	Cruelty by Husband or his Relatives	Importation of Girls
0	ANDHRA PRADESH	2001	50	30	16	149	34	175	0
1	ANDHRA PRADESH	2001	23	30	7	118	24	154	0
2	ANDHRA PRADESH	2001	27	34	14	112	83	186	0
3	ANDHRA PRADESH	2001	20	20	17	126	38	57	0
4	ANDHRA PRADESH	2001	23	26	12	109	58	247	0
...	...	...	...	...	...	...	...	...	...
10672	Lakshadweep	2014	1	0	0	1	2	0	0
10673	Lakshadweep	2014	1	0	0	1	2	0	0
10674	Puducherry	2014	3	1	0	12	1	1	0

	STATE/UT	Year	Rape	Kidnapping and Abduction	Dowry Deaths	Assault on women with intent to outrage her modesty	Insult to modesty of Women	Cruelty by Husband or his Relatives	Importation of Girls
10675	Puducherry	2014	7	6	1	20	7	3	0
10676	Puducherry	2014	10	7	1	32	8	4	0

10677 rows × 9 columns

```
crime_df.rename(columns = {'Kidnapping and Abduction':'Kidnapping_Abduction','Dowry Dea
                           'Assault on women with intent to outrage her modesty':'Hur
                           'Insult to modesty of Women':'Insult_to_womens_modesty',
                           'Cruelty by Husband or his Relatives':'Domestic_Cruelty',
                           'Importation of Girls':'Importation_of_Girls'},inplace= Tr
```

```
crime_df
```

	STATE/UT	Year	Rape	Kidnapping_Abduction	Dowry_Deaths	Hurting_of_womens_modesty	Insult_to_wome
0	ANDHRA PRADESH	2001	50	30	16	149	
1	ANDHRA PRADESH	2001	23	30	7	118	
2	ANDHRA PRADESH	2001	27	34	14	112	
3	ANDHRA PRADESH	2001	20	20	17	126	
4	ANDHRA PRADESH	2001	23	26	12	109	
...	...	...	...	...	...	...	
10672	Lakshadweep	2014	1	0	0	1	
10673	Lakshadweep	2014	1	0	0	1	
10674	Puducherry	2014	3	1	0	12	
10675	Puducherry	2014	7	6	1	20	
10676	Puducherry	2014	10	7	1	32	

10677 rows × 9 columns

Now, let's start with analysing the datas of the column "STATE/UT", for that let's find out the names of all the states/UT through .unique()

```
crime_df['STATE/UT'].unique()
```

```
array(['ANDHRA PRADESH', 'ARUNACHAL PRADESH', 'ASSAM', 'BIHAR',
       'CHHATTISGARH', 'GOA', 'GUJARAT', 'HARYANA', 'HIMACHAL PRADESH',
       'JAMMU & KASHMIR', 'JHARKHAND', 'KARNATAKA', 'KERALA',
       'MADHYA PRADESH', 'MAHARASHTRA', 'MANIPUR', 'MEGHALAYA', 'MIZORAM',
       'NAGALAND', 'ODISHA', 'PUNJAB', 'RAJASTHAN', 'SIKKIM',
       'TAMIL NADU', 'TRIPURA', 'UTTAR PRADESH', 'UTTARAKHAND',
       'WEST BENGAL', 'A & N ISLANDS', 'CHANDIGARH', 'D & N HAVELI',
       'DAMAN & DIU', 'DELHI', 'LAKSHADWEEP', 'PUDUCHERRY',
```

```
       'Andhra Pradesh', 'Arunachal Pradesh', 'Assam', 'Bihar',
       'Chhattisgarh', 'Goa', 'Gujarat', 'Haryana', 'Himachal Pradesh',
       'Jammu & Kashmir', 'Jharkhand', 'Karnataka', 'Kerala',
       'Madhya Pradesh', 'Maharashtra', 'Manipur', 'Meghalaya', 'Mizoram',
       'Nagaland', 'Odisha', 'Punjab', 'Rajasthan', 'Sikkim',
       'Tamil Nadu', 'Tripura', 'Uttar Pradesh', 'Uttarakhand',
       'West Bengal', 'A&N Islands', 'Chandigarh', 'D&N Haveli',
       'Daman & Diu', 'Delhi UT', 'Lakshadweep', 'Puducherry',
       'Telangana', 'A & N Islands'], dtype=object)
```

We can see from above that there are lot many repeated datas, like some of them are repeated again by using capital letters and some of them have issues with space too, like A&N Islands and also Delhi has been repeated again by mentioning it as Delhi UT

```
# First we will remove all repeated uppercase values
def remove_upper_case(r):
    r = r['STATE/UT'].strip()
    r = r.upper()
    return r
crime_df['STATE/UT'] = crime_df.apply(remove_upper_case,axis=1)

# Now use the remove function to replace the other type of repeated datas as discussed
crime_df['STATE/UT'].replace("A&N ISLANDS", "A & N ISLANDS",inplace = True)
crime_df['STATE/UT'].replace("D&N HAVELI", "D & N HAVELI", inplace = True)
crime_df['STATE/UT'].replace("DELHI UT", "DELHI", inplace = True)
```

Let's go through the datas now!

```
crime_df['STATE/UT'].unique()
```

```
array(['ANDHRA PRADESH', 'ARUNACHAL PRADESH', 'ASSAM', 'BIHAR',
       'CHHATTISGARH', 'GOA', 'GUJARAT', 'HARYANA', 'HIMACHAL PRADESH',
       'JAMMU & KASHMIR', 'JHARKHAND', 'KARNATAKA', 'KERALA',
       'MADHYA PRADESH', 'MAHARASHTRA', 'MANIPUR', 'MEGHALAYA', 'MIZORAM',
       'NAGALAND', 'ODISHA', 'PUNJAB', 'RAJASTHAN', 'SIKKIM',
       'TAMIL NADU', 'TRIPURA', 'UTTAR PRADESH', 'UTTARAKHAND',
       'WEST BENGAL', 'A & N ISLANDS', 'CHANDIGARH', 'D & N HAVELI',
       'DAMAN & DIU', 'DELHI', 'LAKSHADWEEP', 'PUDUCHERRY', 'TELANGANA'],
      dtype=object)
```

Let's check the total number of States+UT

```
len(crime_df['STATE/UT'].unique())
```

```
36
```

Which is coming out perfect, hence we are done with our data cleaning process of our dataset

Exploratory Analysis and Visualization

Let us find out the total population of women over the years, 2001-2014, who has been a victim of the crime based on their gender.

```
victims_raped = crime_df.Rape.sum()
victims_kidnapped_abducted = crime_df.Kidnapping_Abduction.sum()
dowery_death = crime_df.Dowry_Deaths.sum()
modesty_assault = crime_df.Hurting_of_womens_modesty.sum()
insult_to_modesty = crime_df.Insult_to_womens_modesty.sum()
domestic_violence = crime_df.Domestic_Cruelty.sum()
girls_imported = crime_df.Importation_of_Girls.sum()
```

```
total_population_of_victim_overall = victims_raped + victims_kidnapped_abducted + dower
```

```
total_population_of_victim_overall
```

```
5321610
```

This above analysis potrays a heartbreaking situation of women in our society, as more than 5 million number of females, over the years 2001-2014, have been a victim of assault, violance, rape or even death, in India alone.

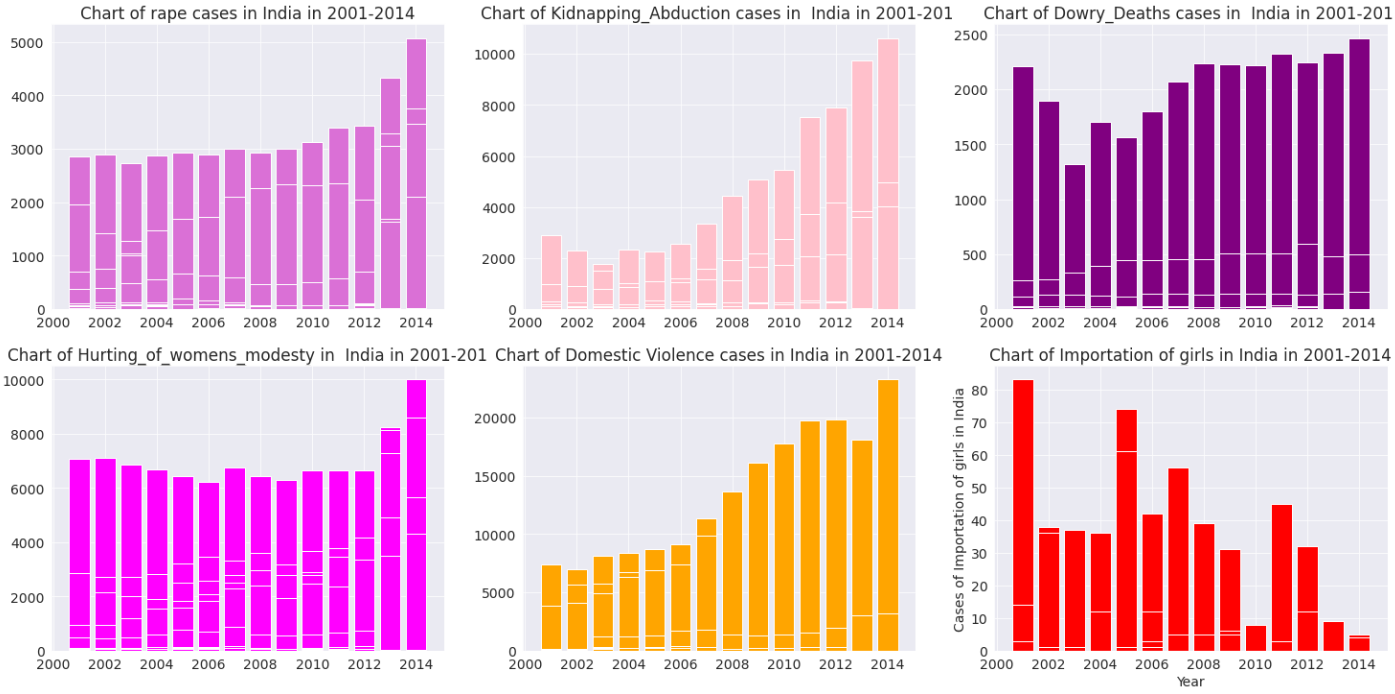
Now let us analyse all the cases sepately by using bar graph.

Note - For our ease, we are doing the analysis for six caterories, excluding the "Insult_to_modesty_of_Women" column.

```
fig, axes = plt.subplots(2,3,figsize=(25,12))

axes[0,0].set_title("Chart of rape cases in India in 2001-2014")
axes[0,0].bar(crime_df.Year,crime_df.Rape,color='orchid');
plt.xlabel('Year') # X-axis
plt.ylabel('Cases of Rape in India') # Y-axis

axes[0,1].set_title("Chart of Kidnapping_Abduction cases in  India in 2001-201 ")
axes[0,1].bar(crime_df.Year,crime_df.Kidnapping_Abduction,color='pink');
plt.xlabel('Year') # X-axis
plt.ylabel('Cases of Kidnapping_Abduction') #Y-axis

axes[0,2].set_title("Chart of Dowry_Deaths cases in  India in 2001-201 ")
axes[0,2].bar(crime_df.Year,crime_df.Dowry_Deaths,color='purple');
plt.xlabel('Year') #X-axis
plt.ylabel('Cases of Dowry_Deaths') #Y-axis

axes[1,0].set_title("Chart of Hurting_of_womens_modesty in  India in 2001-201")
axes[1,0].bar(crime_df.Year,crime_df.Hurting_of_womens_modesty,color='magenta');
plt.xlabel('Year') #X-axis
plt.ylabel('Cases of Hurting_of_womens_modesty') #Y-axis

axes[1,1].set_title("Chart of Domestic Violence cases in India in 2001-2014")
axes[1,1].bar(crime_df.Year, crime_df.Domestic_Cruelty, color = 'orange');
plt.xlabel('Year') #X-axis
```

```
plt.ylabel('Cases of Domestic Violence in India') #Y-axis

axes[1,2].set_title("Chart of Importation of girls in India in 2001-2014")
axes[1,2].bar(crime_df.Year, crime_df.Importation_of_Girls, color = 'red');
plt.xlabel('Year') #X-axis
plt.ylabel('Cases of Importation of girls in India') #Y-axis
```

```
Text(0, 0.5, 'Cases of Importation of girls in India')
```



There are two things to be concluded from the above bar chart -

1. The cases have increased over the years.
2. 2014 has been the year, where violence against women was reported the maximum, under each of the cases except Importation of girls, which can also be cross examined with the code below.

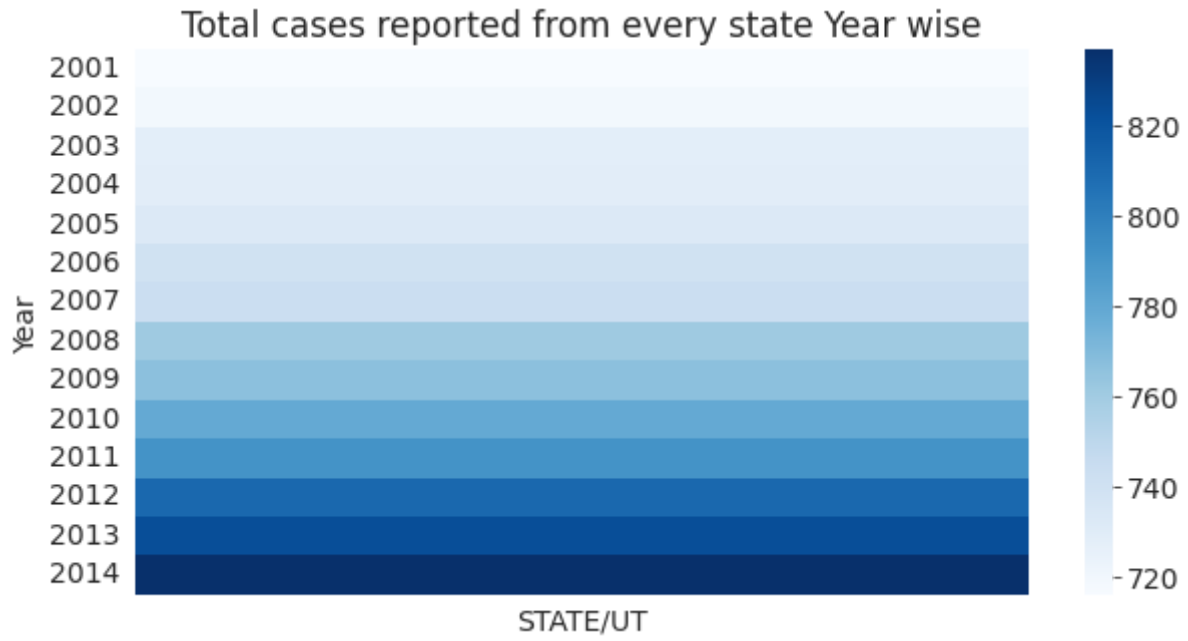
```
count_df = crime_df.groupby('Year')[['STATE/UT']].count()
count_df
```

	STATE/UT
Year	
2001	716
2002	719
2003	728
2004	729
2005	733
2006	740
2007	743
2008	761
2009	767
2010	779

	STATE/UT
Year	
2011	791
2012	811
2013	823
2014	837

Let us use seaborn to take help of heatmap to represent how more cases from each state started coming up more frequently with each passing year.

```
plt.figure(figsize=(10,5))
plt.title("Total cases reported from every state Year wise")
sns.heatmap(count_df,fmt ="d" ,cmap = 'Blues');
```



This heatmap shows how more number of state's name started appearing on the dataset, for reporting crimes and sadly the crime only increased with the passing year.

It gives us the conclusion that overall(cases under each category), from every state, has increased with time, not decreased.

Asking and Answering Questions

As part of this data analysis, it is very crucial to raise question and find answer to them. Here we will try to find out some of the most essential questions, that will help us in drawing a major conclusion from our dataset.

Note - We will be focusing on four major categories for the rest of the analysis, excluding "Hurting_of_womens_modesty" and "Insult_to_modesty_of_Women".

```
crimes_df = crimes_df.drop(['Hurting_of_womens_modesty','Insult_to_womens_modesty'], ax
```

```
crime_df
```

	STATE/UT	Year	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls
0	ANDHRA PRADESH	2001	50	30	16	175	0
1	ANDHRA PRADESH	2001	23	30	7	154	0
2	ANDHRA PRADESH	2001	27	34	14	186	0
3	ANDHRA PRADESH	2001	20	20	17	57	0
4	ANDHRA PRADESH	2001	23	26	12	247	0
...	...	...	...	...	...	...	...
10672	LAKSHADWEEP	2014	1	0	0	0	0
10673	LAKSHADWEEP	2014	1	0	0	0	0
10674	PUDUCHERRY	2014	3	1	0	1	0
10675	PUDUCHERRY	2014	7	6	1	3	0
10676	PUDUCHERRY	2014	10	7	1	4	0

10677 rows × 7 columns

Q . Create a dataframe containing 10 highest reported rape cases in India, in the span of year 2001-2014.

```
max_rape_cases = crime_df.sort_values('Rape',ascending = False).head(10)
max_rape_cases
```

	STATE/UT	Year	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls
10244	MADHYA PRADESH	2014	5076	5688	733	6451	0
9426	MADHYA PRADESH	2013	4335	2873	776	4988	7
10445	RAJASTHAN	2014	3759	4421	408	15905	0
10595	UTTAR PRADESH	2014	3467	10626	2469	10471	0
10291	MAHARASHTRA	2014	3438	2457	279	7696	1
8611	MADHYA PRADESH	2012	3425	1127	743	3988	6
7810	MADHYA PRADESH	2011	3406	1088	811	3732	45
9628	RAJASTHAN	2013	3285	4047	453	15094	1
7025	MADHYA PRADESH	2010	3135	1030	892	3756	5
9472	MAHARASHTRA	2013	3063	1874	320	8542	0

We see from the analysis, the top states that reported the maximum number of rape cases, along with the year, in which they occured. Where, Madhya Pradesh reported the maximum rape cases in the year 2014.

Q. Create a dataframe containing 10 highest reported deaths caused by Dowry cases in India, in the span of year 2001-2014.

```
max_dowry_cases = crime_df.sort_values('Dowry_Deaths',ascending = False).head(10)
max_dowry_cases
```

	STATE/UT	Year	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls
10595	UTTAR PRADESH	2014	3467	10626	2469	10471	0

	STATE/UT	Year	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls
9760	UTTAR PRADESH	2013	3050	9737	2335	8781	0
8132	UTTAR PRADESH	2011	2042	7525	2322	7121	0
8938	UTTAR PRADESH	2012	1963	7910	2244	7661	0
5796	UTTAR PRADESH	2008	1871	4439	2237	8312	0
6563	UTTAR PRADESH	2009	1759	5078	2232	8566	0
7342	UTTAR PRADESH	2010	1563	5468	2217	7978	0
650	UTTAR PRADESH	2001	1958	2879	2211	7365	0
5040	UTTAR PRADESH	2007	1648	3363	2076	7650	0
1366	UTTAR PRADESH	2002	1415	2298	1893	5679	0

From our analysis, we observe that the highest reported dowry death was in Uttar Pradesh in 2014, with number of reports being 2469. One more here to be observed as well is that, Uttar Pradesh is the ONLY state that appears in this list.

Q. Create a dataframe containing 10 highest reported Domestic Violance cases in India, in the span of year 2001-2014.

```
max_domestic_violance_cases = crime_df.sort_values('Domestic_Cruelty',ascending=False).
max_domestic_violance_cases
```

	STATE/UT	Year	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls
10640	WEST BENGAL	2014	1466	4976	501	23278	4
8982	WEST BENGAL	2012	2046	4168	593	19865	12
8172	WEST BENGAL	2011	2363	3711	510	19772	0
9804	WEST BENGAL	2013	1685	3830	481	18116	9
7381	WEST BENGAL	2010	2311	2764	507	17796	8
6602	WEST BENGAL	2009	2336	2187	506	16112	5
10445	RAJASTHAN	2014	3759	4421	408	15905	0
9628	RAJASTHAN	2013	3285	4047	453	15094	1
9050	ANDHRA PRADESH	2013	1635	1595	492	15084	0
5835	WEST BENGAL	2008	2263	1907	451	13663	5

According to our analysis, we see the maximum cases of Domestic Violance cases came from West Bengal in the year 2014, with number of cases reported being 23278.

Q. Create a dataframe containing 10 highest reported Importation cases in India, in the span of year 2001-2014.

```
max_importation_case = crime_df.sort_values(by ='Importation_of_Girls',ascending = Fals
max_importation_case
```

	STATE/UT	Year	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls
115	BIHAR	2001	888	518	859	1558	83

	STATE/UT	Year	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls
3013	BIHAR	2005	1147	929	1014	1574	74
3597	WEST BENGAL	2005	1686	1039	446	6936	61
3590	WEST BENGAL	2005	148	97	48	545	60
4486	BIHAR	2007	1555	1260	1172	1635	56
3005	BIHAR	2005	28	4	40	73	48
7810	MADHYA PRADESH	2011	3406	1088	811	3732	45
3746	BIHAR	2006	1232	1084	1188	1689	42
102	BIHAR	2001	27	11	90	152	39
5378	JHARKHAND	2008	791	499	266	851	39

According to our analysis, maximum of Importation of girls has been reported in Bihar in the year 2011

Q. Find out the total number of cases, in span of 2001-2014 under each category, state wise.

```
counts_df = crime_df.groupby('STATE/UT')[['Rape','Kidnapping_Abduction','Dowry_Deaths',
```

```
counts_df
```

STATE/UT	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls
A & N ISLANDS	336	212	20	288	0
ANDHRA PRADESH	32150	34504	13844	280906	34
ARUNACHAL PRADESH	1316	1470	6	476	0
ASSAM	40190	62074	3268	115300	22
BIHAR	30758	57086	32206	69770	904
CHANDIGARH	770	1682	90	2080	0
CHHATTISGARH	29308	11808	2758	23436	12
D & N HAVELI	132	224	2	90	0
DAMAN & DIU	60	44	6	76	0
DELHI	20312	46586	3758	42834	2
GOA	1062	640	38	532	0
GUJARAT	11644	34670	1108	146468	0
HARYANA	17110	20016	7372	68414	4
HIMACHAL PRADESH	4674	4116	112	7796	0
JAMMU & KASHMIR	7038	21164	294	5390	0
JHARKHAND	22826	14186	7896	23910	298
KARNATAKA	15056	16262	7016	72706	94
KERALA	20030	4452	700	111626	0
LAKSHADWEEP	20	2	0	14	0

STATE/UT	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls
MADHYA PRADESH	90996	35608	21090	102816	134
MAHARASHTRA	48974	30368	9696	193202	6
MANIPUR	1068	2606	6	578	0
MEGHALAYA	2642	670	36	460	8
MIZORAM	2070	30	8	134	6
NAGALAND	562	190	2	32	2
ODISHA	30480	25588	10782	49206	36
PUDUCHERRY	208	306	56	234	0
PUNJAB	14656	15096	3524	30840	4
RAJASTHAN	45684	66278	11854	262200	14
SIKKIM	570	180	4	108	0
TAMIL NADU	16660	30908	5060	45524	30
TELANGANA	1958	1422	578	12738	0
TRIPURA	5060	2202	752	16086	0
UTTAR PRADESH	51150	135906	57256	193738	6
UTTARAKHAND	3752	6484	1974	9756	2
WEST BENGAL	47876	61158	12308	344124	254

Q. Find out the top 5 states, where maximum numbers of cases has been reported in TOTAL in span of 2001-2014, each category wise.

For "Rape" case -

```
counts_df.sort_values(by = 'Rape', ascending = False).head(5)
```

STATE/UT	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls
MADHYA PRADESH	90996	35608	21090	102816	134
UTTAR PRADESH	51150	135906	57256	193738	6
MAHARASHTRA	48974	30368	9696	193202	6
WEST BENGAL	47876	61158	12308	344124	254
RAJASTHAN	45684	66278	11854	262200	14

Madhya Pradesh has reported the highest number of rape cases in TOTAL in span of 2001-2014, where UP, Maharastra, West Bengal and Rajasthan follows the list.

For Kidnapping and abduction case -

```
counts_df.sort_values(by = 'Kidnapping_Abduction', ascending = False).head(5)
```

	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls

STATE/UT	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls

STATE/UT					
UTTAR PRADESH	51150	135906	57256	193738	6
RAJASTHAN	45684	66278	11854	262200	14
ASSAM	40190	62074	3268	115300	22
WEST BENGAL	47876	61158	12308	344124	254
BIHAR	30758	57086	32206	69770	904

Uttar Pradesh has reported the highest number of cses under "Kidnapping and Abduction" in TOTAL in span of 2001-2014, where Rajasthan, Assam, West Bengal and Bihar follows the list

For cases of deaths due to dowry -

```
counts_df.sort_values(by = 'Dowry_Deaths', ascending = False).head(5)
```

STATE/UT	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls
UTTAR PRADESH	51150	135906	57256	193738	6
BIHAR	30758	57086	32206	69770	904
MADHYA PRADESH	90996	35608	21090	102816	134
ANDHRA PRADESH	32150	34504	13844	280906	34
WEST BENGAL	47876	61158	12308	344124	254

Uttar Pradesh has reported the highest number of Deaths caused by Dowry cases in TOTAL in span of 2001-2014, where Bihar, Madhya Pradesh, Andhra Pradesh and West Bengal follows the list.

For Domestic Violance case -

```
counts_df.sort_values(by = 'Domestic_Cruelty', ascending = False).head(5)
```

STATE/UT	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls
WEST BENGAL	47876	61158	12308	344124	254
ANDHRA PRADESH	32150	34504	13844	280906	34
RAJASTHAN	45684	66278	11854	262200	14
UTTAR PRADESH	51150	135906	57256	193738	6
MAHARASHTRA	48974	30368	9696	193202	6

West Bengal has reported the highest number of cases of Domestic Violence in TOTAL in span of 2001-2014, where Andhra Pradesh, Rajsthan, Uttar Pradesh and Maharashtra follows the list.

For Importation of Girls case -

```
counts_df.sort_values(by = 'Importation_of_Girls', ascending = False).head(5)
```

STATE/UT	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls
BIHAR	30758	57086	32206	69770	904
JHARKHAND	22826	14186	7896	23910	298
WEST BENGAL	47876	61158	12308	344124	254
MADHYA PRADESH	90996	35608	21090	102816	134
KARNATAKA	15056	16262	7016	72706	94

Bihar has reported the highest number of Importation of girl's cases in TOTAL in span of 2001-2014, where Jharkhand, West Bengal, Madhya Pradesh and Karnataka follows the list.

Q: Which state has featured in both the lists of "Maximum number of rape cases" and "Maximum number of Importation cases".

```
max_rape_cases.merge(max_importation_case )
```

	STATE/UT	Year	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls
0	MADHYA PRADESH	2011	3406	1088	811	3732	45

It is Madhya Pradesh, who has maximum cases reported in both the categories.

Q: Which state has featured in both the lists of "Maximum number of rape cases" and "Maximum number of Deaths due to Dowry cases".

```
max_rape_cases.merge(max_dowry_cases)
```

	STATE/UT	Year	Rape	Kidnapping_Abduction	Dowry_Deaths	Domestic_Cruelty	Importation_of_Girls
0	UTTAR PRADESH	2014	3467	10626	2469	10471	0

We conclude, it is Uttar Pradesh, who has reported maximum cases in both the given categories.

Inferences and Conclusion

The main aim of the project was to analyse the situation of women in the year 2001-2014.

We also did a deep analysis through charts and by raising important questions. Let us go through some of the important analysis, we have done through third project -

1)More than 5 million females has been a victim of some or other type of Violance, starting from rape to importing them for buisness.
2) We concluded from the series of bar graphs that 2014 was the year, when crimes v under each category.
3) We tried finding out the top 10 highest cases reported ever, along with year in and in which state.Where, Madhya Pradesh having highest number of cases of rape in highest cases in Dowry death in 2014, West Bengal having highest cases in Domestic having the highest cases in importaion of girls in 2011.
4)We summarised the TOTAL number of cases happening, in 2001-2014, by each state.
5)We also found out the top 5 states where maximum number of TOTAL cases has been r

state wise.
6)We also merged the data in two different cases, first one being "Maximum number c
"Maximum number of Importation cases", where we found out it is Madhya Pradesh and
"Maximum number of rape cases" and "Maximum number of Deaths due to Dowry cases", w
be Uttar Pradesh.

```
import jovian
jovian.commit(project = "Crimes_against_women_in_India")
```

```
[jovian] Updating notebook "shaikhmisba07/crimes-against-women-in-india" on
https://jovian.ai
[jovian] Committed successfully! https://jovian.ai/shaikhmisba07/crimes-against-women-
in-india
```

```
'https://jovian.ai/shaikhmisba07/crimes-against-women-in-india'
```