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**SCHOOL OF COMPUTER SCIENCE AND
ENGINEERING**

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Status of Women in India

SUBMITTED BY

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Abstract

The incidents of "Crimes Against Women" in India have witnessed an annual increase through the years. Though it has been changing its forms, places, patterns, and props, the underlying situation of the suppressed has remained the same. The story of persecution and oppression of women in India is widely known yet in many cases neglected.

Through this project, we aim to analyze the datasets containing past records of such incidents, to investigate and predict the socio-economic factors that can be held responsible for the increase in crime rates against women in India. We believe that once these factors have been identified, the solution isn't far.

Scope

Violence against women is a problem across the world. It affects women of all races, ethnic groups, classes and nationalities. It is a life-threatening problem for an individual and a serious problem for all socio-economic and educational classes. It cuts across cultural and religious barriers, impeding the right of women to participate fully in society. Violence against women may take variety of forms, from domestic abuse to rape, to child marriages and to female circumcision. All of them are violations of the most fundamental human rights.

The Indian Constitution which is the fundamental law of the nation, contains numbers of provisions for the benefit and protection of the women. The concept of equality and nondiscrimination finds its due place in Indian constitution. Besides, it also enables the state to adopt measures of affirmative discrimination in favor of women. Apart from fundamental rights, some specific provisions to ensure the rights of women have also been incorporated in Directive Principles of State Policy. However, despite constitutional protection and several legislations, gender discrimination and injustice continue to occur. This is mainly because those who enforce the laws or interpret do not always fully share the philosophy of gender justice concept.

Violence against women is a violation of fundamental freedoms and rights. Violence against women can be domestic, public, physical, emotional or mental.

Women have fear of violence in their mind which causes the lack of participation in various areas of life. Also, it causes a deep impact of the trauma in their minds which remains even after post-violence corrective measures and rehabilitation.

The widespread illiteracy, the cultural barriers and subordination is very common. The unfriendly process of law has kept most distressed women away from the law and courts. Victimized women have various experiences with the national criminal justice systems. They cannot always depend on the criminal justice system for either protection or rehabilitation. In terms of combating violence against women, there often exist gaps and ambiguities in the laws criminalizing violence. Laws tend to be piecemeal, focusing on specific forms of violence rather than dealing comprehensively with all forms of violence against women. When the law is in place, there is often weak law enforcement. This leads to victim's apathy and distrust and avoidance of the to victim's apathy and distrust and avoidance of the 4 system. In certain situations, such as the cruelty and dowry deaths, corruption among police and other enforcement officials works as a major obstacle. Breaking the cycle of abuse will require collaboration and action between governmental and nongovernmental actors including educators, health-care authorities, legislators, the judiciary and the mass media. Education of both men and women will lead to change in attitudes and perceptions. It is not easy to eradicate deep seated cultural value or alter traditions that perpetuates discrimination. We come to a perspective that gender violence is a violation of human rights that needs to be combated more strongly by both men and women who believe in justice for all citizens irrespective of their class, caste, racial, religious and ethnic backgrounds. The Governmental authorities, social organizations, women's organizations, voluntary groups and NGOs should come forward to serve the cause of rape victims. There is an urgent need to bring a change in the attitude of the police authorities in the matters of rape cases. They should also have a sympathetic attitude towards the victims of rape and the necessary support should be provided to the victims. to victim's apathy and distrust and avoidance of the system. In certain situations, such as the cruelty and dowry deaths, corruption among police and other enforcement officials works as a major obstacle.

Breaking the cycle of abuse will require collaboration and action between governmental and nongovernmental actors including educators, health-care authorities, legislators, the judiciary and the mass media. Education of both men and women will lead to change in attitudes and perceptions.

It is not easy to eradicate deep seated cultural value or alter traditions that perpetuates discrimination. We come to a perspective that gender violence is a

violation of human rights that needs to be combated more strongly by both men and women who believe in justice for all citizens irrespective of their class, caste, racial, religious and ethnic backgrounds.

The Governmental authorities, social organizations, women's organizations, voluntary groups and NGOs should come forward to serve the cause of rape victims. There is an urgent need to bring a change in the attitude of the police authorities in the matters of rape cases. They should also have a sympathetic attitude towards the victims of rape and the necessary support should be provided to the victims.

Problem Statement

- To Present the situation of different Crimes perpetrated against Women by utilizing different Visual Idioms
- To portray an unmistakable image of the Trends and Factors influencing these violations committed in different portions of India.

Objectives of the Project

The following are the objectives that we would accomplish with the implementation of this project:

- Study the various crimes committed against women in India
- Visualise and analyse the data in an interactive manner by using proper abstraction and encoding techniques.
- To make a state-wise analysis of the crimes committed against women across India
- Make various Visual Idioms to highlight the most common crime committed in 2021
- Make visual Idioms to identify the most common type of crimes and the age group that is affected the most.
- Make various Visual Idioms to analyse which factors affect the crimes and the various trends about the crimes against women

Datasets

Dataset 1:

<https://www.kaggle.com/datasets/greeshmagirish/crime-against-women-20012014-india>

	A	B	C	D	E	F	G	H	I	J	K	L
1		STATE/UT	DISTRICT	Year	Rape	Kidnapping	Dowry Dea	Assault on	Insult to m	Cruelty by	Importation of Girls	
2	0	ANDHRA P	ADILABAD	2001	50	30	16	149	34	175	0	
3	1	ANDHRA P	ANANTAP	2001	23	30	7	118	24	154	0	
4	2	ANDHRA P	CHITTOOR	2001	27	34	14	112	83	186	0	
5	3	ANDHRA P	CUDDAPAI	2001	20	20	17	126	38	57	0	
6	4	ANDHRA P	EAST GODA	2001	23	26	12	109	58	247	0	
7	5	ANDHRA P	GUNTAKAI	2001	0	0	0	1	0	0	0	
8	6	ANDHRA P	GUNTUR	2001	54	51	7	139	129	378	0	
9	7	ANDHRA P	HYDERABA	2001	37	39	24	118	27	746	0	
10	8	ANDHRA P	KARIMNAG	2001	56	49	62	414	81	224	0	
11	9	ANDHRA P	KHAMMAN	2001	47	30	17	180	336	172	0	
12	10	ANDHRA P	KRISHNA	2001	37	21	10	208	72	265	0	
13	11	ANDHRA P	KURNOOL	2001	29	47	13	141	107	92	0	
14	12	ANDHRA P	MAHABOC	2001	59	27	14	176	41	69	0	
15	13	ANDHRA P	MEDAK	2001	35	20	26	100	25	192	0	
16	14	ANDHRA P	NALGOND	2001	35	19	31	188	59	214	0	
17	15	ANDHRA P	NELLORE	2001	46	80	10	207	228	287	0	
18	16	ANDHRA P	NIZAMABA	2001	21	21	19	55	15	228	0	
19	17	ANDHRA P	PRAKASHA	2001	19	12	5	140	100	119	0	
20	18	ANDHRA P	RANGA RE	2001	72	83	37	113	55	421	7	
21	19	ANDHRA P	SECUNDE	2001	0	0	1	0	1	0	0	
22	20	ANDHRA P	SRIKAKUL	2001	8	12	6	38	47	108	0	
23	21	ANDHRA P	VIJAYAWA	2001	25	48	2	84	122	520	0	
24	22	ANDHRA P	VIJAYAWA	2001	1	0	0	1	1	0	0	
25	23	ANDHRA P	VISAKHA R	2001	12	12	3	67	48	99	0	
26	24	ANDHRA P	VISAKHAP	2001	13	6	0	33	462	204	0	
27	25	ANDHRA P	VIZIANAG	2001	8	2	0	40	22	121	0	

This dataset describes number of individual crimes in each district of each state from 2001 to 2014 those individual crimes are rape, dowry death, Assault on women, Insult of modesty, cruelty by husband and importation of girls.

Dataset 2:

https://ncrb.gov.in/en/crime-in-india-table-addtional-table-and-chapter-contents?field_date_value%5Bvalue%5D%5Byear%5D=2020&field_select_table_title_of_crim_value=5&items_per_page=50

Sl	State/UT	Murder with Rape/Gang Rape Incidents	Murder with Rape/Gang Victims	Crime rate with murder Rape/Gang	Dowry Deaths (Sec. 304B IPC) Incidents	Dowry Deaths (Sec. 304B IPC) Victims	Dowry Deaths (Sec. 304B IPC) Crime Rate	Acid Attack (Sec. 326A IPC) Incidents	Acid Attack (Sec. 326A IPC) Victims	Acid Attack (Sec. 326A IPC) Crime Rate	Attempt to Acid Attack (Sec. 326B IPC) Incidents	Attempt to Acid Attack (Sec. 326B IPC) Victims	Attempt to Acid Attack (Sec. 326B IPC) Crime Rate	Attempt to Acid Attack (Sec. 326B IPC) Incidents	Attempt to Acid Attack (Sec. 326B IPC) Victims	Attempt to Acid Attack (Sec. 326B IPC) Crime Rate	Cruelty by Husband or his relatives (Sec. 498 A IPC) Incidents	Cruelty by Husband or his relatives (Sec. 498 A IPC) Victims	Cruelty by Husband or his relatives (Sec. 498 A IPC) Crime Rate
1	Andhra Pradesh	5	5	0.0	111	111	0.4	4	4	0.0	1	1	0.0	1	1	0.0	6546	6579	24.9
2	Arunchal Pradesh	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	69	70	8.3
3	Assam	26	26	0.2	148	150	0.9	4	4	0.0	2	2	0.0	2	2	0.0	11408	11413	66.8
4	Bihar	31	31	0.0	1046	1047	1.8	1	1	0.0	0	0	0.0	0	0	0.0	1935	1936	3.3
5	Chhattisgarh	8	8	0.1	71	71	0.5	1	1	0.0	0	0	0.0	0	0	0.0	941	974	4.4
6	Goa	1	1	0.1	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	8	8	1.0
7	Gujarat	7	7	0.0	8	7	0.0	4	4	0.0	8	8	0.0	8	8	0.0	3345	3345	10.2
8	Haryana	2	2	0.0	251	251	1.8	1	1	0.0	0	0	0.0	0	0	0.0	4119	4122	30.0
9	Himachal Pradesh	8	8	0.2	1	1	0.0	0	0	0.0	0	0	0.0	0	0	0.0	259	259	7.1
10	Jharkhand	9	9	0.0	275	280	1.5	1	1	0.0	0	0	0.0	0	0	0.0	857	882	4.6
11	Karnataka	7	8	0.0	176	178	0.5	5	6	0.0	1	1	0.0	1	1	0.0	2055	2092	6.3
12	Kerala	1	1	0.0	6	6	0.0	4	4	0.0	2	2	0.0	2	2	0.0	2707	2736	14.7
13	Madhya Pradesh	27	27	0.1	608	627	1.5	5	5	0.0	4	4	0.0	4	4	0.0	3540	3540	13.7
14	Maharashtra	20	23	0.0	197	197	0.3	4	4	0.0	1	1	0.0	1	1	0.0	6729	6749	11.3
15	Manipur	3	3	0.1	1	1	0.1	0	0	0.0	0	0	0.0	0	0	0.0	7	7	0.4
16	Meghalaya	2	2	0.1	1	1	0.1	2	2	0.1	0	0	0.0	0	0	0.0	17	17	1.0
17	Mizoram	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	7	7	1.2
18	Nagaland	0	0	0.0	1	1	0.1	0	0	0.0	0	0	0.0	0	0	0.0	2	2	0.3
19	Odisha	18	20	0.1	320	320	1.4	6	6	0.0	0	0	0.0	0	0	0.0	3659	3659	16.2
20	Punjab	5	6	0.0	480	480	0.4	2	2	0.0	1	1	0.0	1	1	0.0	1271	1271	8.9
21	Rajasthan	8	8	0.0	479	480	1.3	2	2	0.0	0	0	0.0	0	0	0.0	13765	13886	36.1
22	Sikkim	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	1	1	0.3
23	Tamil Nadu	3	3	0.0	40	40	0.1	0	0	0.0	1	1	0.0	1	1	0.0	689	702	1.8
24	Telangana	14	14	0.1	158	175	0.8	3	4	0.0	0	0	0.0	0	0	0.0	7453	7745	40.0
25	Tripura	2	2	0.1	23	23	1.2	2	2	0.1	0	0	0.0	0	0	0.0	386	388	17.9
26	Uttar Pradesh	31	31	0.0	2274	2302	2.1	21	23	0.0	4	4	0.0	4	4	0.0	14484	14333	13.1
27	Uttarakhand	0	0	0.0	65	65	1.2	1	1	0.0	0	0	0.0	0	0	0.0	668	669	12.1
28	West Bengal	9	9	0.0	522	523	1.1	29	29	0.1	5	5	0.0	5	5	0.0	19962	19966	41.7
29	Andaman Islands	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	2	2	1.1
30	Chandigarh	0	0	0.0	1	1	0.2	1	1	0.2	0	0	0.0	0	0	0.0	96	96	17.5
31	Dadra and Nicobar Islands	0	0	0.0	1	1	0.3	0	0	0.0	0	0	0.0	0	0	0.0	4	4	1.1
32	Delhi	1	1	0.0	110	112	1.2	2	2	0.0	3	3	0.0	3	3	0.0	2597	2591	27.0
33	Jammu & Kashmir	0	0	0.0	9	9	0.1	0	0	0.0	0	0	0.0	0	0	0.0	349	349	5.5
34	Ladakh	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	3	3	2.3
35	Lakshadweep	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
36	Puducherry	0	0	0.0	2	2	0.1	0	0	0.0	0	0	0.0	0	0	0.0	9	9	1.1

This is standard dataset that describes number of individual criminal incidence, The victims involved in those incidences and the crime rate for that individual crime for every Indian state or Union territory. The 2nd column describes the state which is followed its statical data. 3rd column describes the number of specific criminal incidents (per lakh women) in the year corresponding to the state. Column 4 then gives us victims involved in those incidents. This one is essential since each incident can have multiple victims involved. 5th column describes the crime rate which is normalised based on population (which helps us to improve the condition of law and order in each state.)

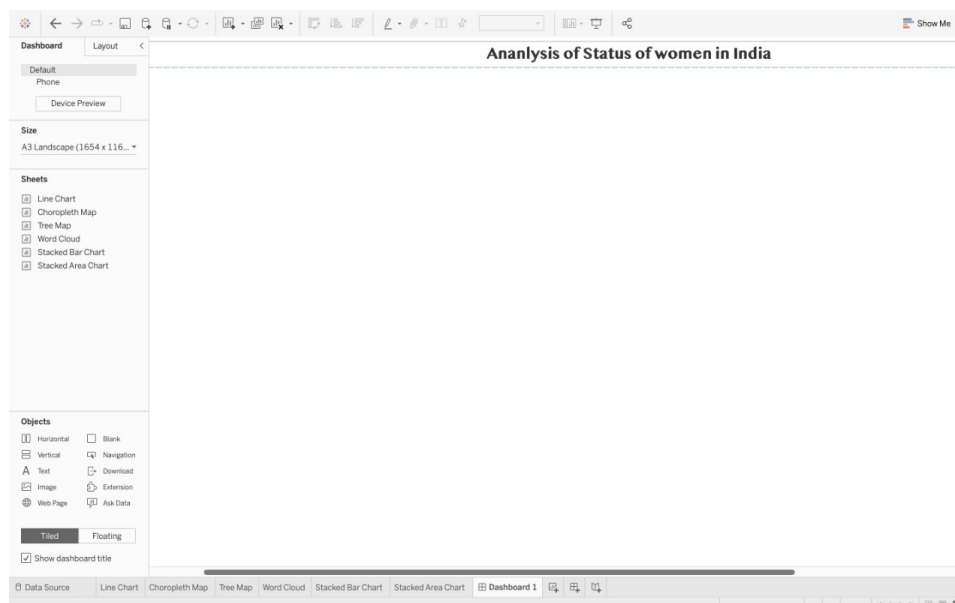
This is followed by incident-wise, victim-wise and crime-rate wise specification for a range of crimes like dowry deaths, acid attacks, women assaults, kidnapping, husband cruelty, and in the end, it gives us the sum of all crimes committed.

Data Abstraction

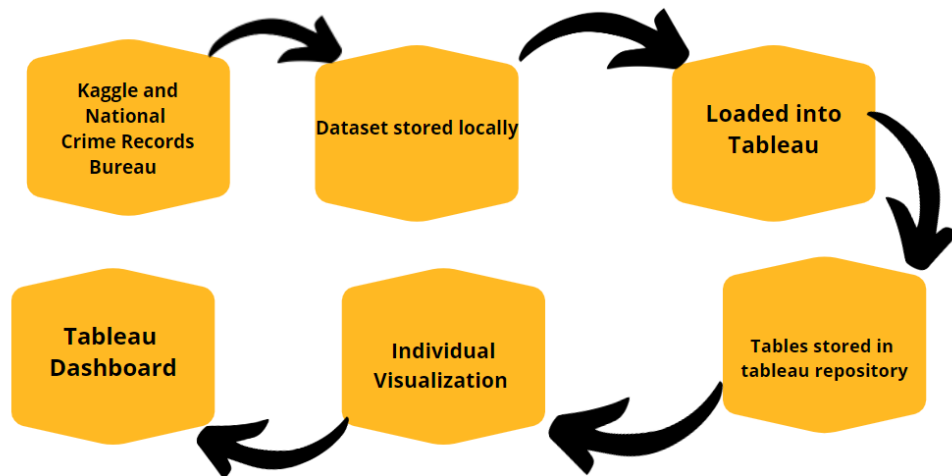
Attribute	Data Type
STATE/UT	Categorical data
DISTRICT	Categorical data
Year	Ordinal data
Rape	Quatitative data
Kidnapping and Abduction	Quatitative data
Dowry Deaths	Quatitative data
Assault on women with intent to outrage her modesty	Quatitative data
Insult to modesty of Women	Quatitative data
Cruelty by Husband or his Relatives	Quatitative data
Importation of Girls	Quatitative data

Design

Design template of dashboard



Methodology



- 1.The standard dataset used here in the dashboard creation was picked from 2 sources namely Kaggle and the national crime records bureau.
- 2.Both the dataset are stored locally in the system in excel format
- 3.Those datasets loaded into tableau is updated into its tableau repository.
4. Then we done with individual visualization using repository data
- 5.The dashboard is setup based on repository data which uses multiple individual visualization

Design Justification

We have used Tableau as our visualization tool and Power Bi for sample Visualization

We preferred this because Tableau is robust and doesn't break when importing big data.

Tableau works like an all-in-one tool, and you do not need to jump to another tool to create your presentations for your data. In Tableau, it is all integrated.

Tableau goes further by allowing you to create Dashboards.

Dataset connectivity

Both the standard dataset and sample dataset has been connected to Tableau.

The screenshot shows the Tableau interface with the 'crimes_against_women_2001-2014' dataset connected. The 'Connections' pane on the left lists the dataset as a 'Text file'. The 'Files' pane shows a list of files including 'crimes_against_women_2001-2014.csv', 'hierarchy.csv', and 'violence_data.csv'. The main view displays a table with columns: Name, F1, State/UT, District, and Year. The table contains 11 rows of data, including entries for Andhra Pradesh, Anantapur, Chittoor, Cuddapah, East Godavari, Guntakal Rly., Guntur, and Hyderabad City.

Name	F1	State/UT	District	Year
crimes_against_women_2001-2014.csv				
	0	ANDHRA PRADESH	ADILABAD	01/01/2001
	1	ANDHRA PRADESH	ANANTAPUR	01/01/2001
	2	ANDHRA PRADESH	CHITTOOR	01/01/2001
	3	ANDHRA PRADESH	CUDDAH	01/01/2001
	4	ANDHRA PRADESH	EAST GODAVARI	01/01/2001
	5	ANDHRA PRADESH	GUNTAKAL RLY.	01/01/2001
	6	ANDHRA PRADESH	GUNTUR	01/01/2001
	7	ANDHRA PRADESH	HYDERABAD CITY	01/01/2001

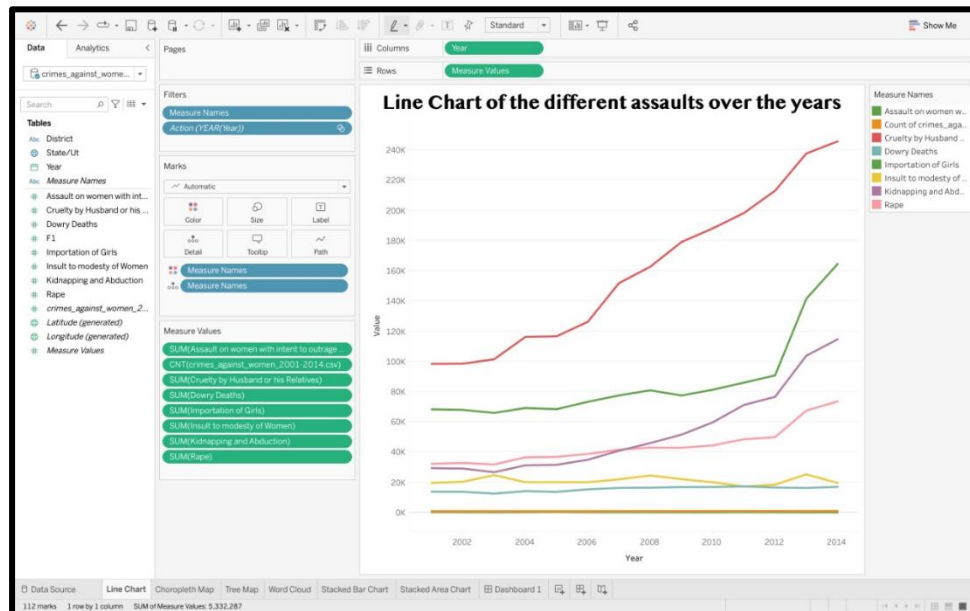
The screenshot shows the Tableau interface with the 'CIIRReport (TABLE 3A.2 (1))' dataset connected. The 'Connections' pane on the left lists the dataset as a 'Microsoft Excel' file. The 'Sheets' pane shows a list of sheets including 'CIIRReport'. The main view displays a table with columns: SL, State/UT, Murder with Rape/Gang..., Murder with Rape/Gang..., and Crime rate with murder Rape... The table contains 8 rows of data, including entries for Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Goa, Gujarat, and Haryana.

SL	State/UT	Murder with Rape/Gang...	Murder with Rape/Gang...	Crime rate with murder Rape...
1	Andhra Pradesh	5	5	
2	Arunachal Pradesh	0	0	
3	Assam	26	26	
4	Bihar	3	3	
5	Chhattisgarh	8	8	
6	Goa	1	1	
7	Gujarat	7	7	
8	Haryana	2	2	

Visual Encoding

Line chart

Line chart is the comparison of two or more numeric attributes. Line chart is used to show information that changes over time.



Observation:

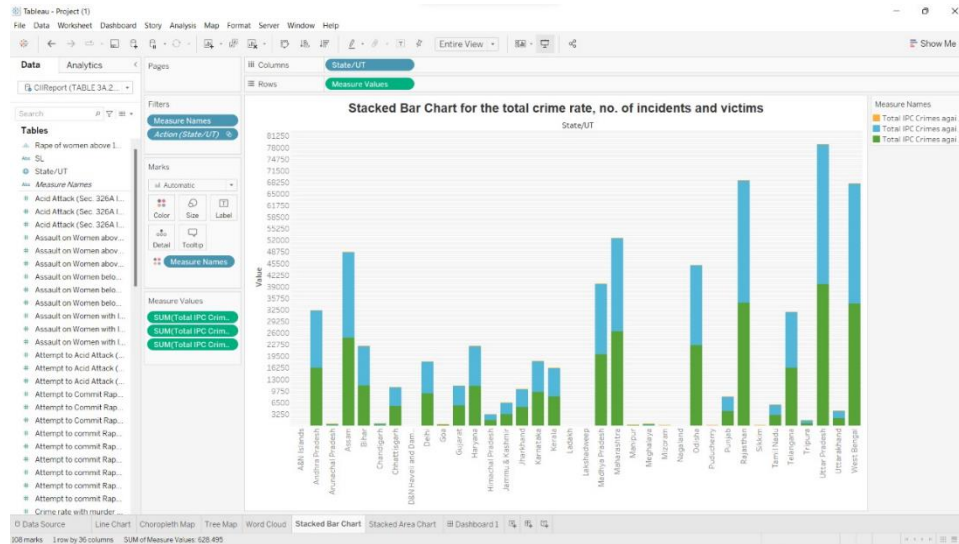
- The above line chart is the visualization of different crimes against women over years.
- The channel colour has been used for different crimes and the mark “line” is used to represent the increment/decrement of a crime over years.

Inference:

- So, from the above line chart it can be concluded that even with the implementation of many laws for the safety of women, every crime rate has an increment over years.
- It can be seen that Cruelty of husband against women has the first place followed by assault on women.

Stacked Bar chart

Stacked bar chart is used to visualize two or more categorical variables across a numerical variable.



Observation:

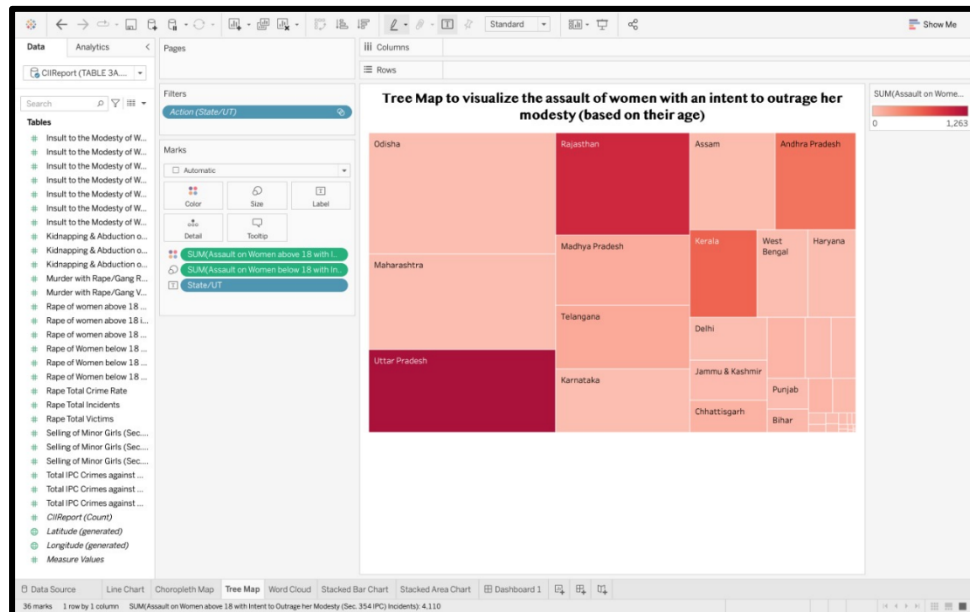
The above stacked bar chart is used to visualize the total crime rate, total number of crime incidents, total number of victims suffered in each state of India.

Inference:

As per the Indian Panel Code, almost equal number of crime incidents and number of victims are same in Uttar Pradesh, Rajasthan, West Bengal.

Tree Map

Tree maps are visualizations for hierarchical data. Tree Maps are primarily used to display data that is grouped and nested in a hierarchical (or tree-based) structure.



Observation:

The above tree map is the total visualization of assault of women in all states of India. A tree map consists of nested rectangles whose size are arranged based on the assault on women below 18, and whose colour is arranged based on the assault on women above 18.

The channels colour and size are used.

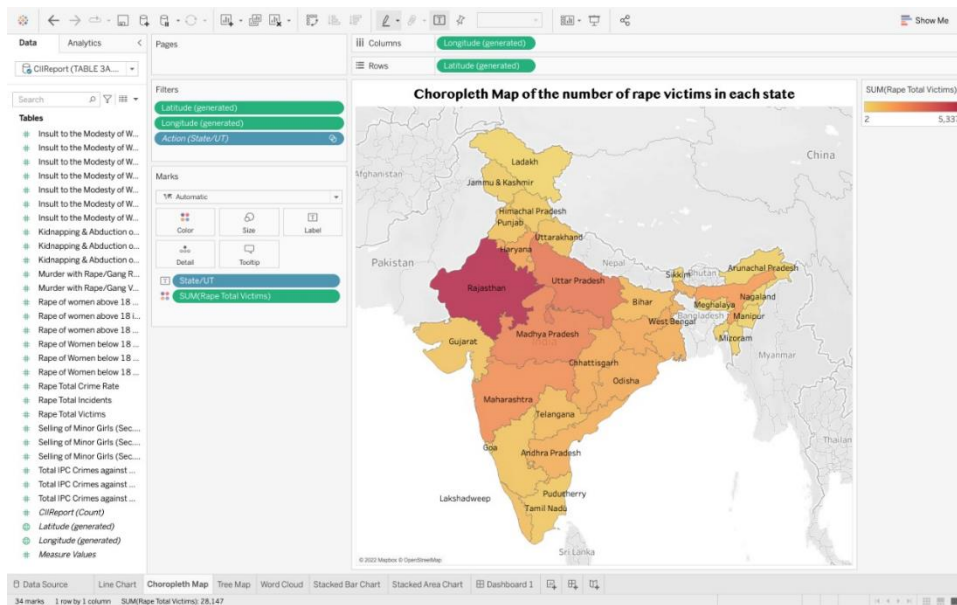
Inference:

It can be inferred that Uttar Pradesh recorded the more crime rate on assault of women below 18, followed by Maharashtra and Uttar Pradesh.

And Uttar Pradesh recorded more crimes on assault of women above 18 followed by Rajasthan, Andhra Pradesh and Kerala.

Choropleth Map

Choropleth Maps display divided geographical areas or regions that are coloured, shaded or patterned in relation to a data variable.



Observation:

The above choropleth map is used to visualize the number of crime rates in each state of India. The channel “colour Luminance” is used.

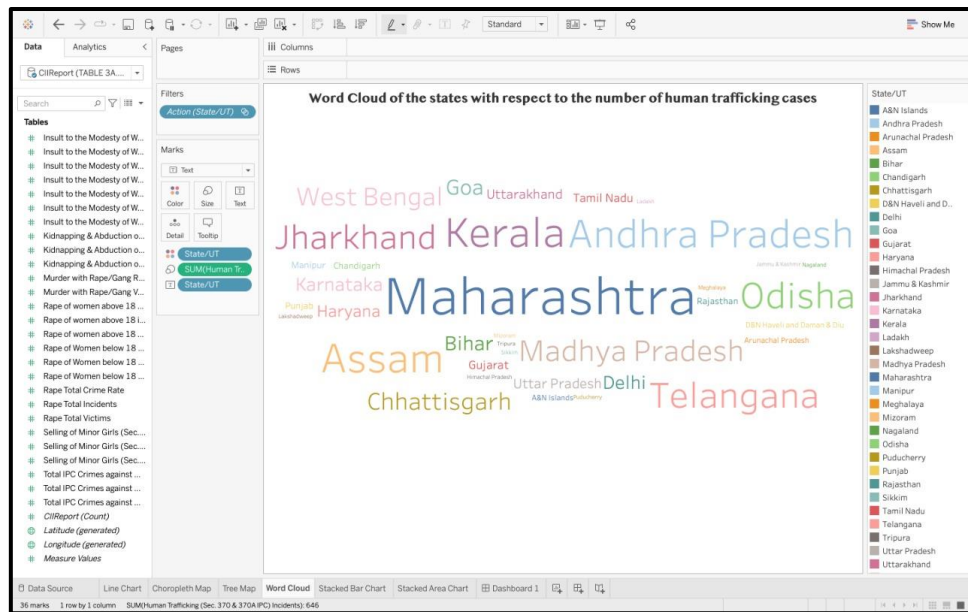
Inference:

It can be inferred that Rajasthan has more rape cases followed by Uttar Pradesh, Madhya Pradesh and Maharashtra.

Word Cloud

Word clouds are graphical representations of word frequency that give greater prominence to words that appear more frequently in a source text. The larger the word in the visual the more common the word was in the document

Generated Word Cloud:



Observation:

- We have used colors and size as marks in the above word cloud to differentiate various states.
- The Maharashtra state has the highest number of trafficking cases in our country.

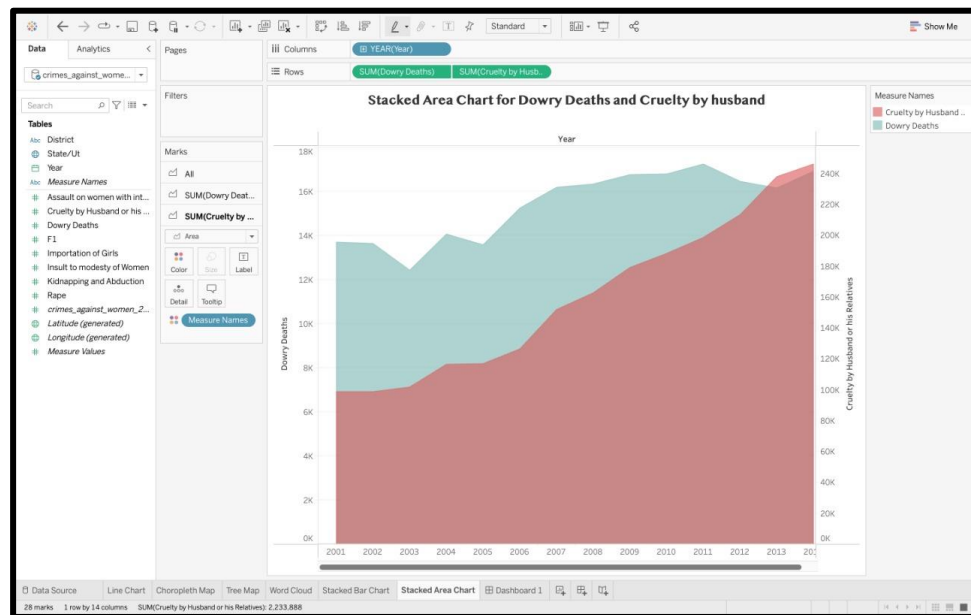
Inference:

- The above representation is word cloud which gives us an idea about the human trafficking cases in various states of our country.
- The bigger the size of state name the higher number of trafficking cases in that state.

Stacked Area Chart

A stacked area chart displays the evolution of a numeric variable for several groups of a dataset. Each group is displayed on top of each other, making it easy to read the evolution of the total, but hard to read each group value accurately.

Generated Stack Area Chart:



Observation:

- We have used the size and colour as the marks in the above representation to differentiate between two common crime numbers all over the country.
- We can easily observe the trend in the crime numbers over the year from the above visualisation of stacked area chart.

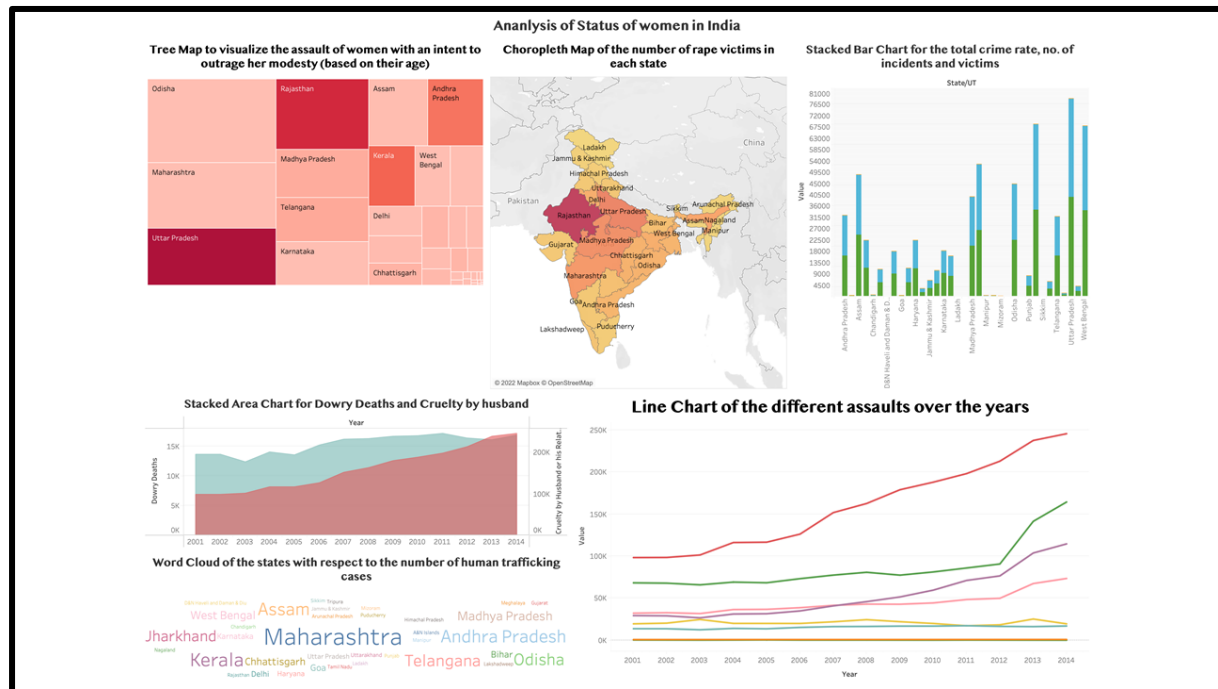
Inference:

- The above visualization is of Stacked area chart which helps us in comparing the trends between cases of Dowry Deaths and cruelty by husband.

Dashboard

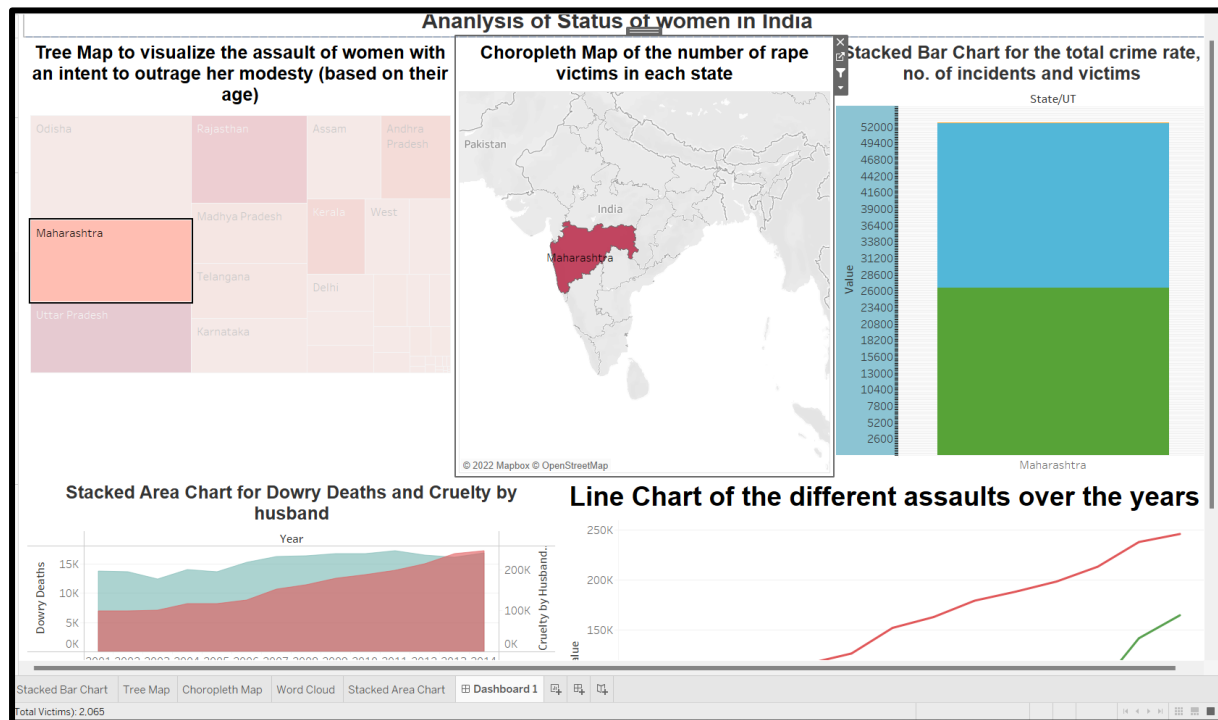
A dashboard is a collection of several views, letting you compare a variety of data simultaneously.

Dashboard Created:



We can also focus on the number of crimes in a specific state using our dashboard

Example: We have focused on Maharashtra



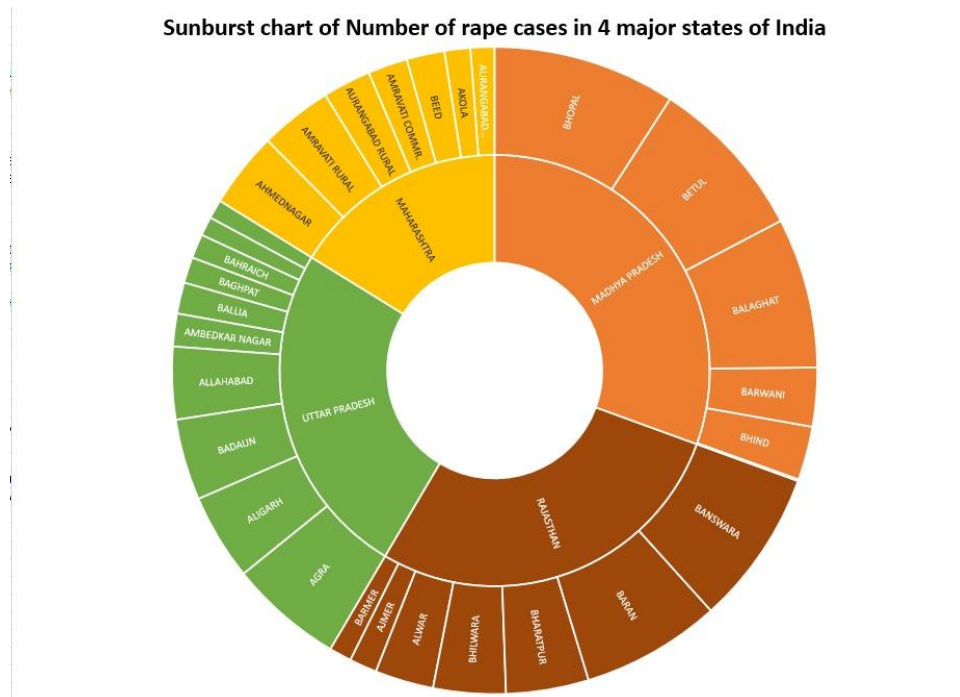
Sample Visualization

For sample visualization we created a dataset for the states which has the highest crimes of rape against women i.e, Madhya Pradesh, Maharashtra, Uttar Pradesh, Rajasthan. Some districts are taken under each state and the number of rape cases in that district from that particular state are visualized through a sunburst diagram

Dataset:

STATE/UT	DISTRICT	Rape
MADHYA PRADESH	BALAGHAT	87
	BARWANI	34
	BETUL	95
	BHIND	31
	BHOPAL	106
	BHOPAL RLY.	1
MAHARASHTRA	AHMEDNAGAR	44
	AKOLA	15
	AMRAVATI COMMUR.	23
	AMRAVATI RURAL	42
	AURANGABAD COMMUR.	14
	AURANGABAD RURAL	28
	BEED	22
	AGRA	66
UTTAR PRADESH	ALIGARH	50
	ALLAHABAD	42
	AMBEDKAR NAGAR	19
	AURAIYA	11
	AZAMGARH	11
	BADAUN	47
	BAGHPAT	15
	BAHRAICH	14
	BALLIA	18
	AJMER	16
RAJASTHAN	ALWAR	34
	BANSWARA	90
	BARAN	81
	BARMER	13
	BHARATPUR	48
	BHILWARA	42

Sunburst Diagram:



Observation:

From the above sunburst we can observe the different districts under each state and the size/angle of each state and district is depicted through the number of rape cases occurred respectively.

Inference:

We can see through the hierarchy of the sunburst diagram that the states Madhya Pradesh, Uttar Pradesh, Rajasthan have almost same total rape cases whereas Maharashtra has slightly a smaller number of rape cases.

Conclusion

We Created a Dashboard with various visual Idioms depicting Crimes Against Women in India. For our Project we developed different visual idioms and used the following visualization techniques:

- Stacked bar Chart
- Line Chart
- Stacked Area Chart

- Tree Map
- Word Cloud
- Choropleth Map
- Sunburst Diagram

Through our visual dashboards, we provided an understanding about the areas in India where majority of crimes occur and the type of crime that is most common. We also highlighted the age group of women who are most prone to fall victim to such crimes. With the help of a comprehensive analysis on these visual idioms, we can identify the areas of concern and develop better laws and policies to protect women.

References:

- [1] Rupsayar Das. June 2012. Representation of violence against women against women in Indian print media: A comparative Analysis. Global Media Journal – Indian Edition
<https://www.caluniv.ac.in/global-mdia-journal/Students'%20Research/SR1%20RUPSAYAR.pdf>
- [2] G. Vicente, T. Goicoa and P. Fernandez-Rasines. December 2019. Crime against women in India: unveiling spatial patterns and temporal trends of dowry deaths in the districts of Uttar Pradesh. Royal Statistical Society.
<https://rss.onlinelibrary.wiley.com/doi/full/10.1111/rssa.12545?af=R>
- [3] R. Devakunchari, Bhowmick S, Bhutada S P, Shishodia Y. January 2019. Analysis Of Crimes Against Women In India Using Regression. International Journal of Engineering and Advanced Technology (IJEAT). <https://www.ijeat.org/wp-content/uploads/papers/v8i2s2/B10270182S219.pdf>
- [4] Jaya Preethi Mohan, Dr.D.Usha. July 2019. Data Visualization on Crime against Women . International Journal of Recent Technology and Engineering (IJRTE).
<https://www.ijrte.org/wp-content/uploads/papers/v8i2S4/B10140782S419.pdf>
- [5] R.N. Mangoli, Ganapati M. Tarase. 2009. Crime Against Women in India: A Statistical Review. International Journal of Criminology and Sociological Theory.
<https://www.semanticscholar.org/paper/Crime-Against-Women-in-India%3A-A-Statistical-Review-Mangoli-Tarase/ac07157cca1662f6fe8f2d0bfcd554406fcf1d69>

Datasets:

[1] Crimes Against Women 2001 – 2014 (India)

<https://www.kaggle.com/greeshmagirish/crime-against-women-20012014-india>

[2] National Crime Reports Bureau

https://ncrb.gov.in/en/crime-in-india-table-addtional-table-and-chapter-contents?field_date_value%5Bvalue%5D%5Byear%5D=2020&field_select_table_title_of_crim_value=5&items_per_page=50