

EXPLORATORY ANALYSIS ON CRIME IN INDIA

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The data set chosen is *Crimes in India*. The data set contains major crimes happening in India across all the states from 2001-2010 which we are all used to hearing every day.

Data set contains crimes such as

Murder, sexual assault on women, dowry deaths.

Burglary, riots, robbery, auto theft.

Kidnapping and abduction of girls, importation of girls from foreign countries.

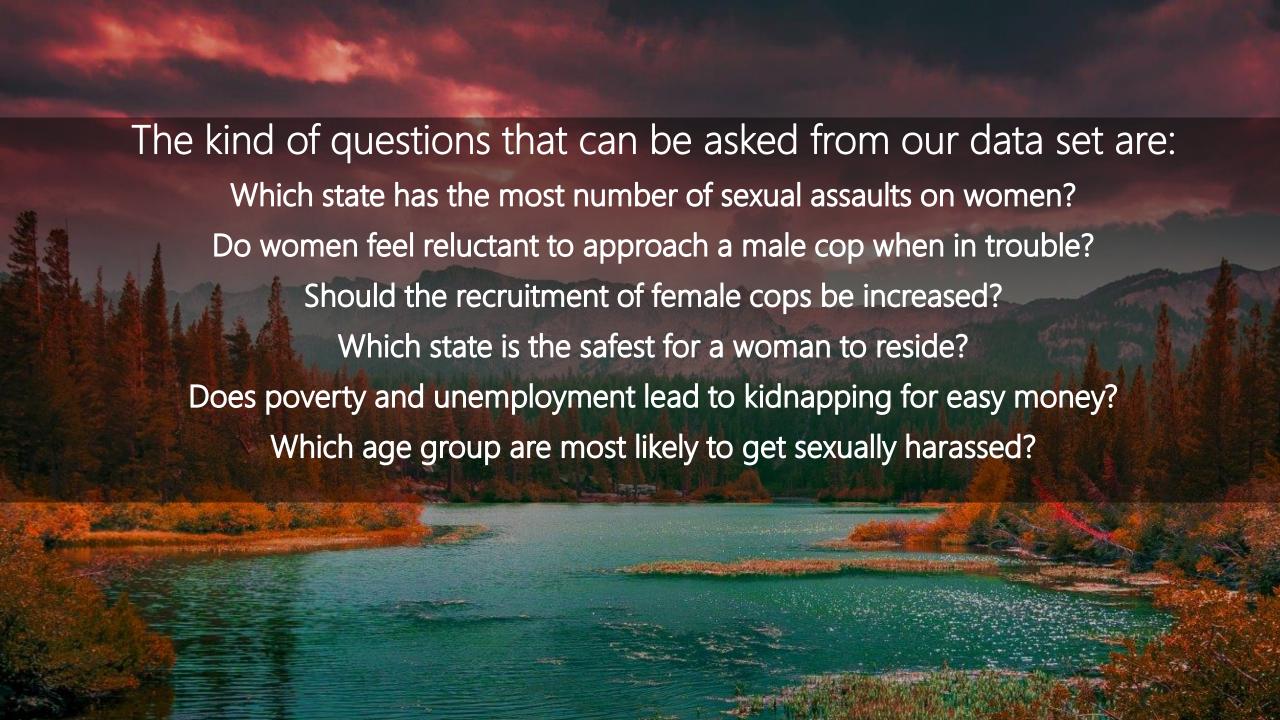
Some typical goals are to identify groups of genes expression patterns across samples that are closely related or to find unknown subgroups among samples.

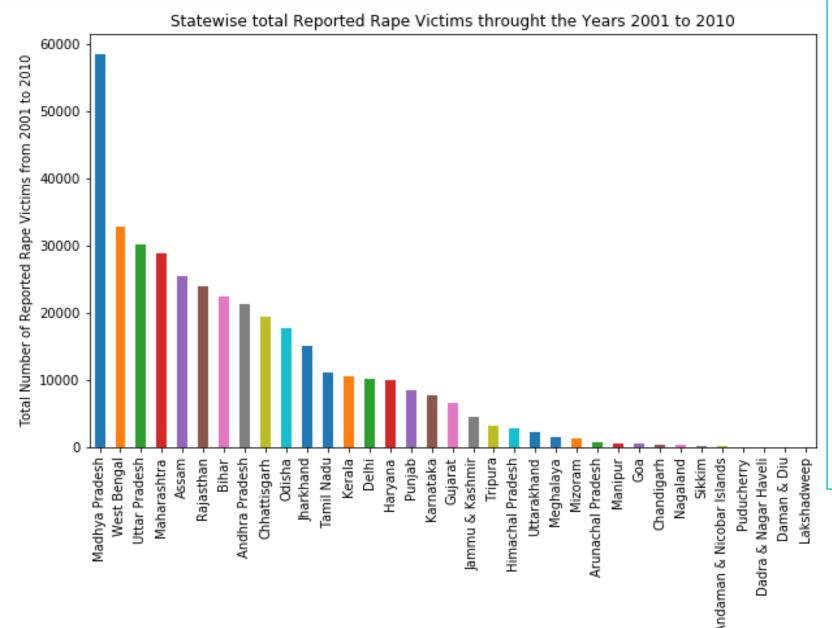
We also tried to find gaping holes in our system which shows that even though the recruitment of police has increased over the years but the bandwagon of crime has increased radically

Do keep in mind that 'correlation does not imply causation'

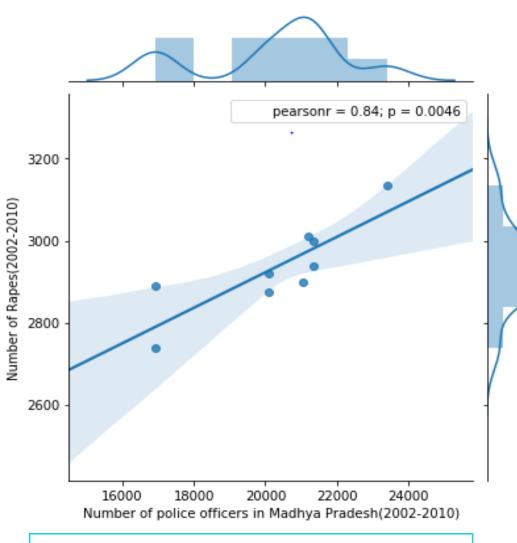
Crime in India is a "National Menace" and is on the rise and also it's high time we contemplate and do something about it before there's no going back (Unless we had a time machine xD)







- 1. Madhya Pradesh has the highest number of rapes when spanned from year 2001-2010.
- 2. The North-Eastern States have relatively lesser number of rapes.
- 3. Law and order is slick in Madhya Pradesh, and hence supports the fact that Madhya Pradesh has highest number of rapes.
- 4. Madhya Pradesh hasn't passed a death penalty and has no legislative bill against those convicted of rape and assault which might be the reason for increased number of rapes.

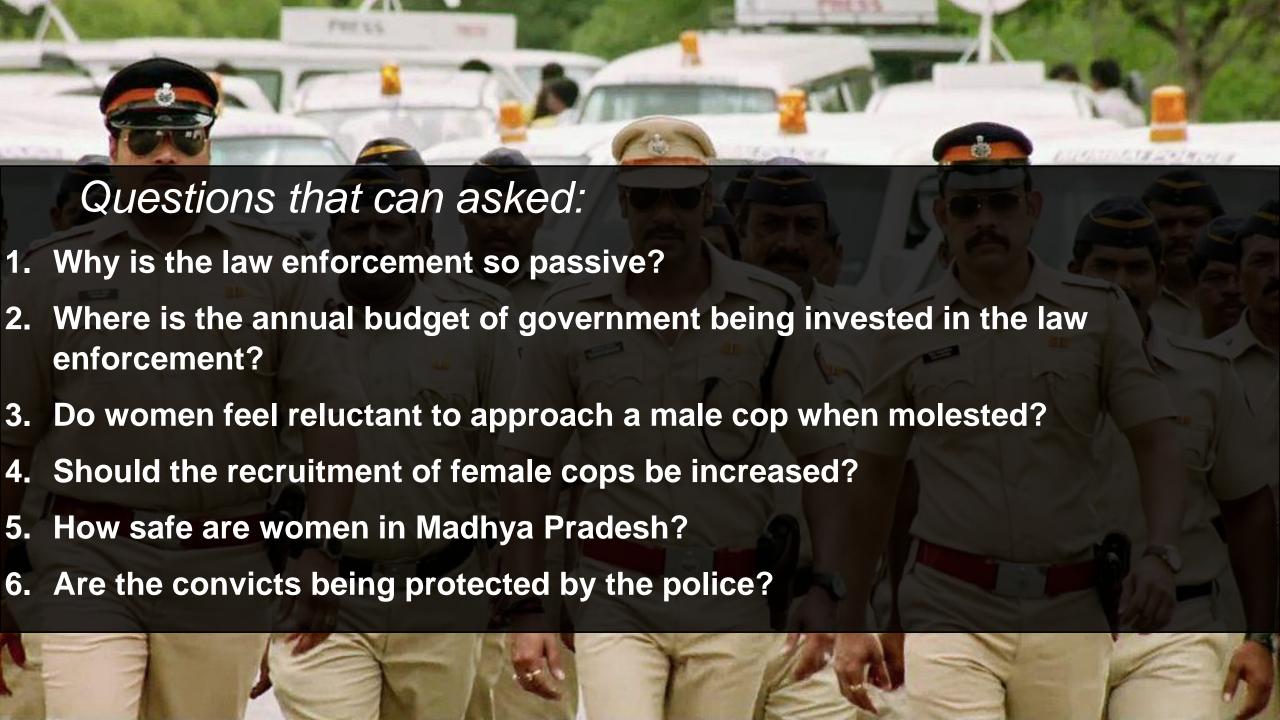


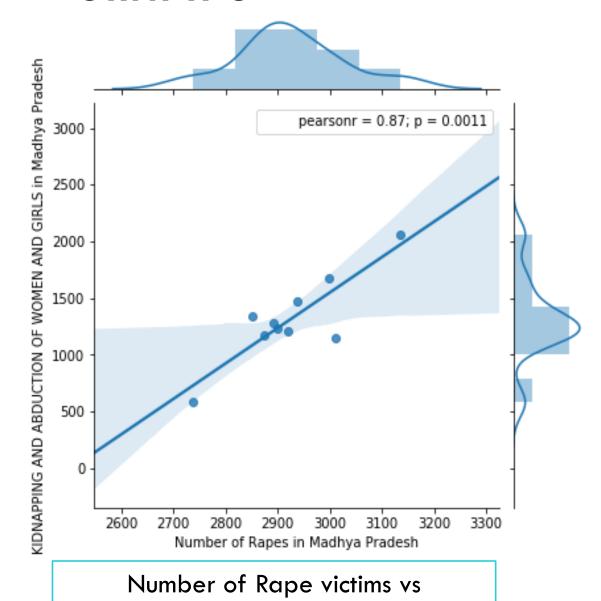
Number of Rape victims vs Number of police officers in MP

The plot has a correlation of 0.84 and shows the increasing number of rapes even though the police recruitment is increasing which partially supports the fact that the government expenditure on police force is going down the trash.

This plot shows the gaping holes present in the government system of India. The graph on general knowledge should have had a low correlation which implies that the law and order of the state has an impact on people and the law enforcement force is governing the state as expected.

But we know the fact that correlation does not imply causation and hence this strong correlation might be due to increased population or low literacy rate.





Kidnapping & Abduction in MP

The plot has a correlation of 0.87

This plot supports our general intuition that kidnapping of girls and rapes are correlated and are like two sides of the same coin.

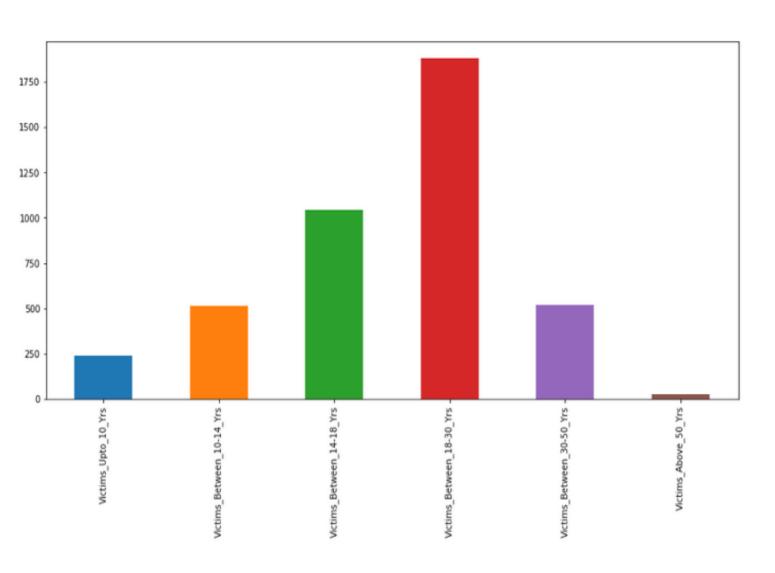
We know the fact that in most of the cases girls being kidnapped ended up being raped and assaulted.

This graph also depicts the mind-set of the kidnapper and how it would turn out in the end for him and the girl.



Questions that can be asked:

- 1. Are all the women being kidnapped getting molested?
- 2. Is the kidnapper's sole agenda to only get money?
- 3. Does poverty and unemployment in Madhya Pradesh lead to kidnapping for easy money?
- 4. Are women and girls being exported to other countries from Madhya Pradesh?
- 5. Can this plot be used to predict the mind-set of the kidnapper?



This graph shows that no age group of women is legitimately safe in Madhya Pradesh which is deeply disturbing and frightening.

Molestation against women of age group 18-30 years is the highest. The women in this age group belong to the working class and hence due to job timings in the night would have led to molestation and rape.

The height of age group 18-30 years is more because the victims have the courage to report the offenders while the age group of less than 10, 10 - 14 and 14 - 18 years are usually unreported since the victim is scared and don't know that it's wrong.

Victims of age group greater than 50 has the least number of rapes

Questions that can be asked:

Which age group are most likely to get sexually harassed?

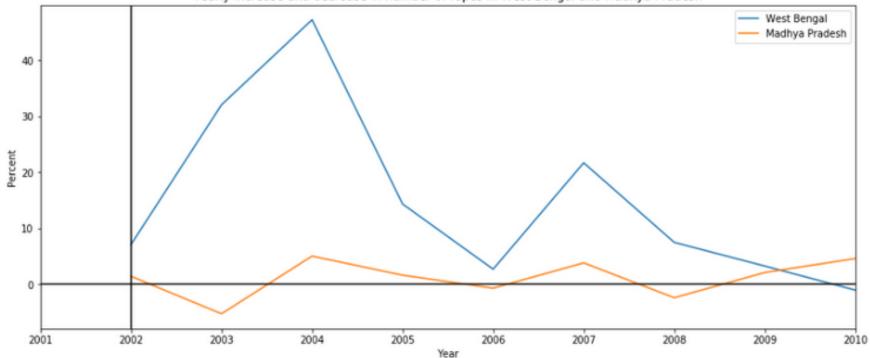
Should schools appoint counsellors to help the victims to come out and report the offenders?

Should working class women be provided a safer kind of transport system when they have jobs in the night? (e.g. Call centres, IT sector)



Yearly increase and decrease in number of rapes in West Bengal and Madhya Pradesh





- 1. This graph shows the yearly percentage variation of the number of rapes in West Bengal and Madhya Pradesh.
- 2. From the previous plots we know that Madhya Pradesh had the highest number of rapes and West Bengal was trailing behind Madhya Pradesh to be second.
- 3. Even though Madhya Pradesh has the highest number of rapes, the yearly boom in number of rapes is low and also is decreasing in the years 2003,2006,2008 and this implies the government is trying to stop this menace at the roots and make Madhya Pradesh a much safer state.
- 4. But the yearly increase in number of rapes in West Bengal is skyrocketing every year which is more disastrous than Madhya Pradesh having more number of rapes.

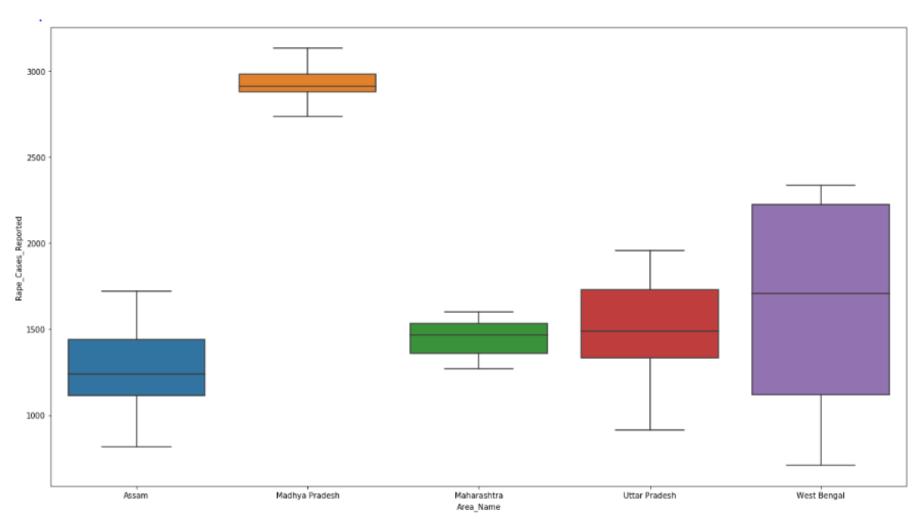
Questions that can be asked: Can West Bengal overtake Madhya Pradesh in total number of rapes in a few years?

Should we be more concerned about West Bengal due to its alarming increase in the number of rapes?

How effective is the government of West Bengal in controlling the number of rapes?

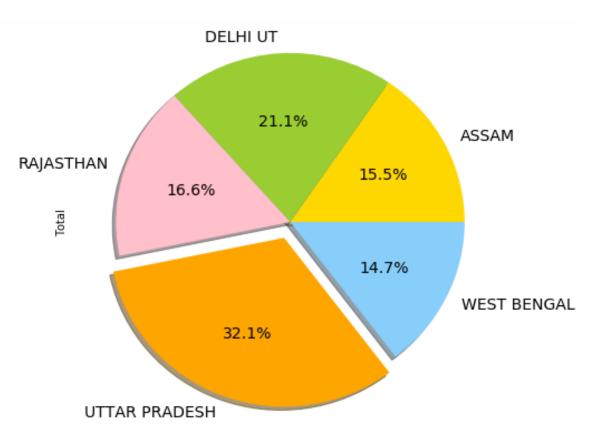


- This plot shows that all the boxes are symmetrical which means the values are distributed equally.
- Madhya Pradesh has the highest median which supports the fact that it has the highest number of rapes.
- The least number of rapes in Madhya Pradesh is greater than any of the highest number of rapes in any state.
- West Bengal has a bigger width compared to all of the boxes which implies the values are distributed greatly distributed.



QUESTIONS THAT CAN BE ASKED

CAN WEST BENGAL OVERTAKE MADHYA PRADESH IN TOTAL NUMBER OF RAPES IN A FEW YEARS?
SHOULD WE BE CONCERNED ABOUT MADHYA PRADESH OR WEST BENGAL?
WHERE ARE THE NUMBER OF RAPES DISTRIBUTED SIGNIFICANTLY?



- ■This pie chart shows the top 5 states which has the highest number of kidnapping cases reported from the year 2001-2010.
- ■Each segment gives the percentage of women kidnapped.
- •Uttar Pradesh has the highest number of kidnaps in India.
- The reason behind kidnapping is mainly unemployment, poverty, illiteracy and politics, riots.
- ■Uttar Pradesh is the most populated state in India and has highest unemployment rate and also has communal clashes and riots from time to time which might be causing abductions.
- ■But even though Delhi has low unemployment rate and high literacy rate (86.4%), the kidnapping cases is still high which might be due to strong criminal organizations overlooked by unbreakable politicians in Delhi.

Questions that can be asked:

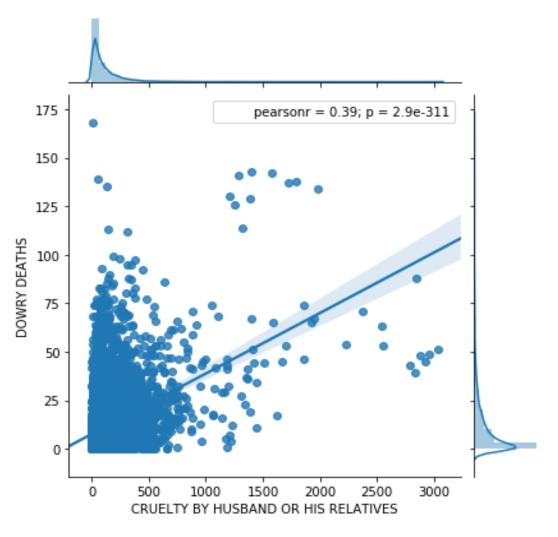
Which state is safe for women?

Is the law enforcement checking women trafficking?

Do illegal immigrants from Bangladesh in West Bengal kidnapping women?

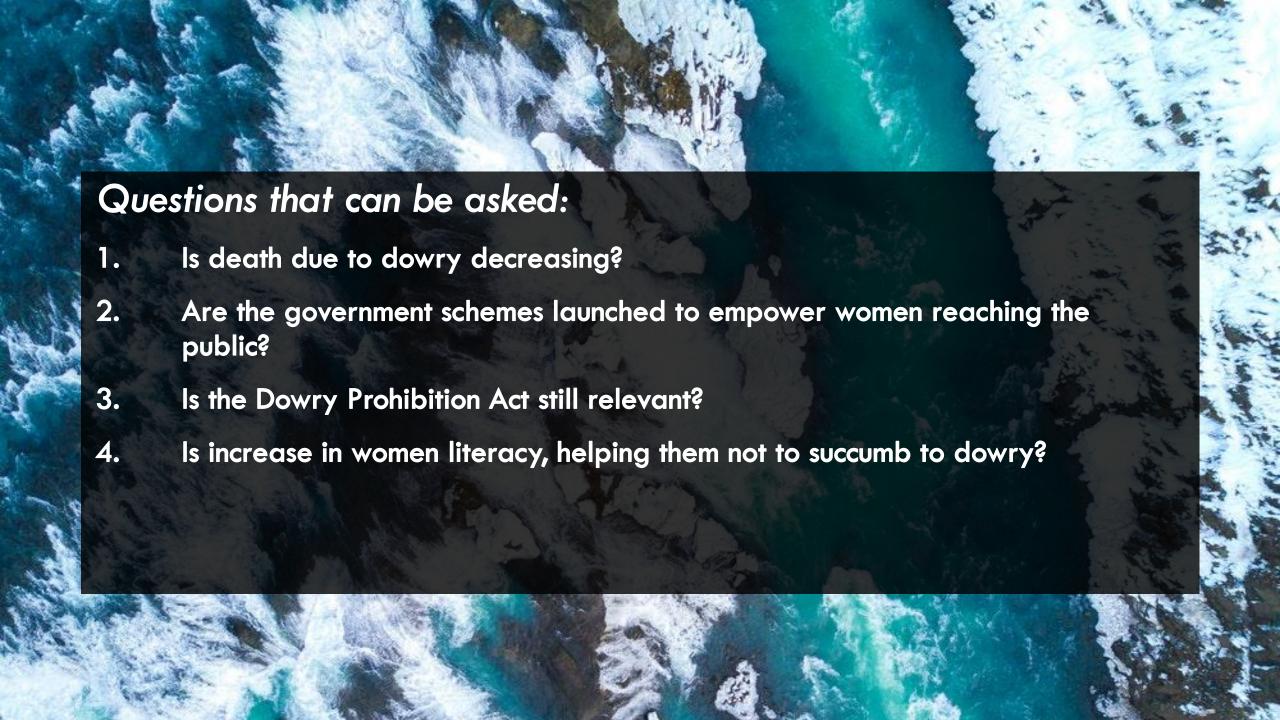
Can unemployment and poverty in Uttar Pradesh be the reason for increased cases of kidnapping?

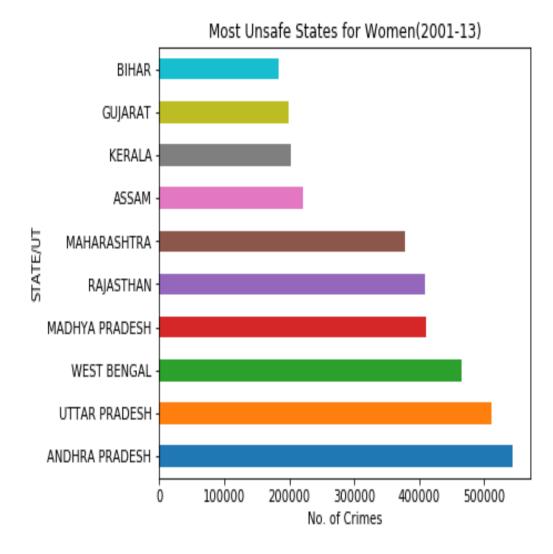
Are riots in Uttar Pradesh the reason for such a high number for women to get kidnapped?



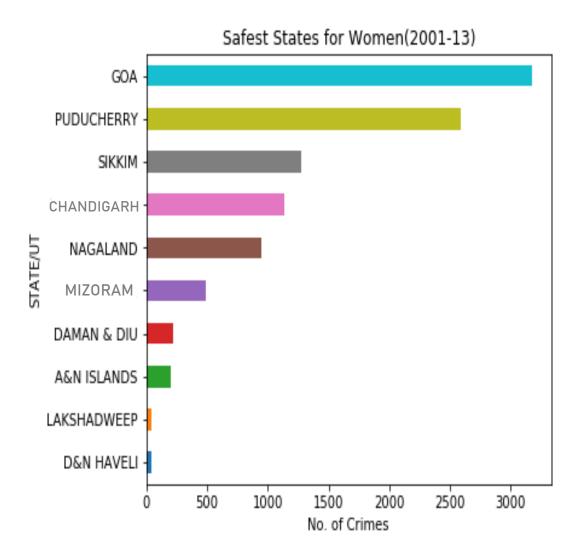
Dowry Deaths vs Cruelty by husband & his relatives

- 1. This scatter plot projects the correlation between dowry deaths and cruelty by husband and his relatives towards the wife.
- 2. The plot has a 0.39 correlation.
- 3. This plot partially supports the fact that the traditional "Indian System" called dowry still exists to some extent.
- 4. Usually the newly wed bride gets frightened when her husband asks for dowry and then gets tortured by the husband for not giving dowry which ultimately leads to her committing suicide.
- 5. But since the correlation is not so strong, it glorifies the fact that women are being educated in the recent past years. Due to this, women can differentiate between what's right or wrong on her own judgement.





- 1. The crimes in this graph include rape, kidnap, molestation, dowry death, trafficking of girls.
- 2. This graph sums up all the crimes against women and gives a clear cut picture of where women can trust with their lives.
- 3. Andhra Pradesh is the most unsafe state form women which implies there is:
- More gender inequality
- Law enforcement is a failure
- Women literacy and empowerment is on the low.
- There is a huge shortage of policewomen, which discourages victims from sharing their experience with police officers.
- The judicial system is a disgrace for the women in Andhra Pradesh with no death penalty for offenders.
- Violence against women is not projected by the media, which makes the general public think everything is alright.
- 4. Uttar Pradesh and West Bengal share borders with Nepal and Bangladesh respectively, so trafficking should be checked at borders.



- 1. This graph clearly shows that the union territories in India is the safest place for women in India.
- 2. The reasons are:
- Since Union territories are governed by the Union Government and not by the state, the hearing happens in the High Court directly for which the punishment is severe.
- Less population decreases the frequency of men assaulting women.
- But "under reporting" of crimes might also be the reason of low crime statistic in Lakshadweep.
- 3. It can also be observed that Lakshadweep, Mizoram, Nagaland and Goa are famous tourist attractions in India which infers that the foreign women tourists are safe in these states.

NOTE: The scale of number of rapes in both the plots are different.