Geovisualization of Top 25 Cities by Population in India

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Link to visualization: https://agdhruv.github.io/mapbox-scrollytelling-starter/

The datasets given to us for this project was the population of 25 most populous cities in India in the years 2001 and 2011. Our task was to geo-visualize this data and relate it to other population-related nuances. We have used this project develop our own knowledge of data visualisation and create a reference tool for us to use in the future. We decided not to mention our inferences on the webpage, because an effective visualization would allow the viewer to do that at their own discretion.

Method and Motivation

With the help of tools such as Mapbox, we were able to manipulate the a digital version of the map of India, and decide for ourselves what form we intend to present our data in. Having the option of adding multiple layers on the map encouraged us to think about more and more related parameters that we could potentially represent using this tool. At the same time, we ensured that we avoid congestion of the map due to too many data points.

The parameters that we added to our given datasets are:

1. **Population Density (city wise):** measurement of population per unit area
    - Since every city has different initial population, it is difficult to gauge the growth rate of population by the increase in number of people. Therefore, we added Population density which is a much better parameter when it one compares growth rate among cities.

2. **Literacy Rate (region wise):** percentage of the population aged seven years or above who can read and write with understanding.
    - We wanted to explore the difference in the literacy rates of the four regions (north, south, west and east parts of India) as the population rose. For this, we collected the Census data on literacy rates, and took an average of the rates of the states in all four regions. The results can be seen in the visualisation and appropriate inferences can be made.
3. **Sex ratio (region wise):** ratio of male to female in a given place.
    - Having observed the trend of growth in population density in almost all of the cities in our data set, we wanted to investigate the uniformity of this growth by looking at the difference in the average of sex ratio of all states region wise between 2001 and 2011.
4. **Voter Turnout for Lok Sabha election (region wise):** number of voters voting to number of registered voters.
    - We collected the state-wise voter turnout percentage for 1999 and 2009 Lok Sabha elections from the official Election Commission of India records. Through this, we wanted to gauge if the voter turnout has increased despite the sharp increase in population.
5. **Reported Forest Cover (region wise):** percentage of the area of a state covered by forests.
    - We collected the relevant data from the official records of the Forest Survey of India held in 2001 and 2011. We wanted to establish to what extent the increase in population caused the forest cover in a region to come down (and the result was surprising!).