DATA ANALYSIS

On

"Indian Census 2011 Data"

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OBJECTIVE

> ➢ Analyse the Indian census 2011 data and discover the significant findings obtained from it.

TARGET AUDIENCE

❖ **Analyst**: This project can help analysts get various insights about Indian diversity.

❖ **Government Authorities**: Findings from this project can help government authorities find out about underdeveloped regions of the country so that necessary measures should be taken by the government to set up the development project in these regions.

❖ **Student**: This project can help students to get a broad overview of the outcomes of Indian Census 2011.

LANGUAGE AND MODULE USED

Language:

- SQL
- Python

Module:

- SQL extension
- cx_Oracle
- Pandas
- Matplotlib

SUMMARY

The Indian Census is the most credible source of information on Demography (Population characteristics), Economic Activity, Literacy and Education, Housing Household Amenities, Urbanisation, Fertility and Mortality etc. Census 2011 was the 15th National Census of the Country. This census was conducted under the guidance of Registrar General and Census Commissioners, India Mr. C. Chandramouli.

In this project, an in-depth analysis of the Indian Census 2011 data is done, and various insights such as population, total male and female, SC and ST, growth rate, sex ratio, literacy rate, etc. corresponding to district and state are obtained.

ANALYSIS AND FINDINGS


Total districts in each state
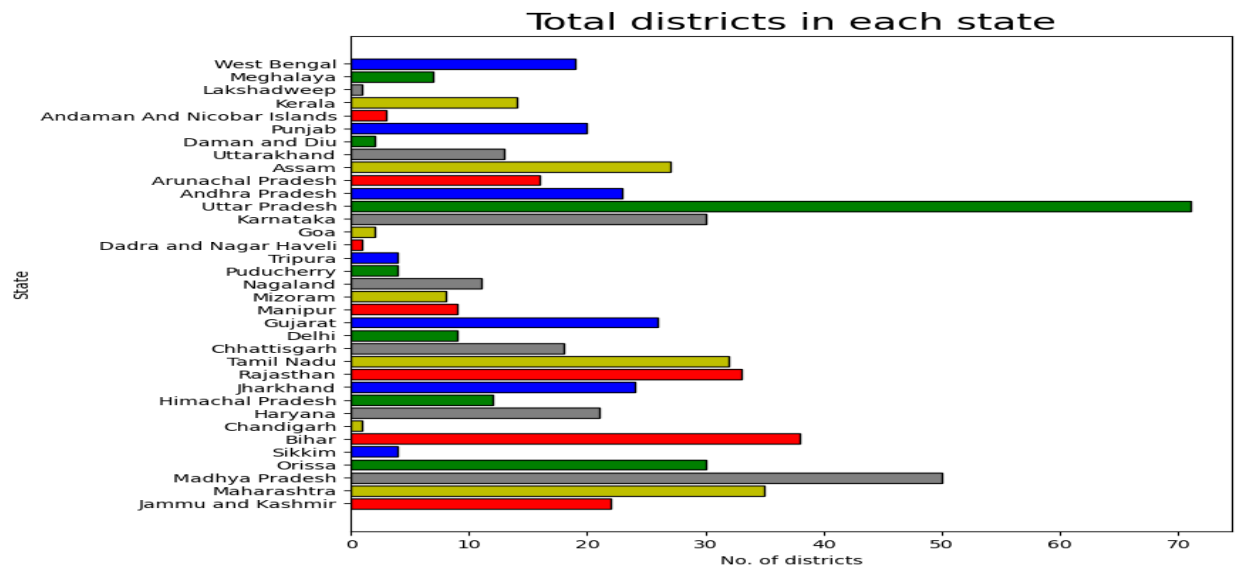
 The above bar graph shows the total number of districts in each state. From this visualization, it can be said that 'Uttar Pradesh' has the most districts, whereas 'Lakshadweep', 'Dadra and Nagar Haveli', and 'Chandigarh' have the fewest.


State-wise growth rate
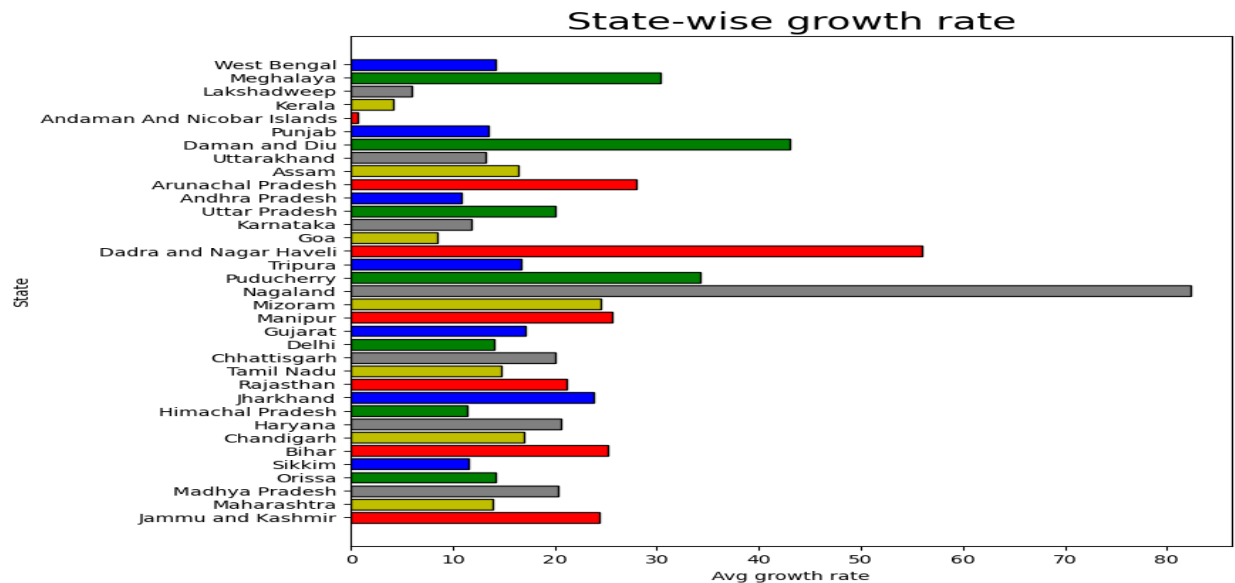
The above visualization shows that 'Nagaland' has the highest growth rate, while 'Andaman and Nicobar Islands' has the lowest.
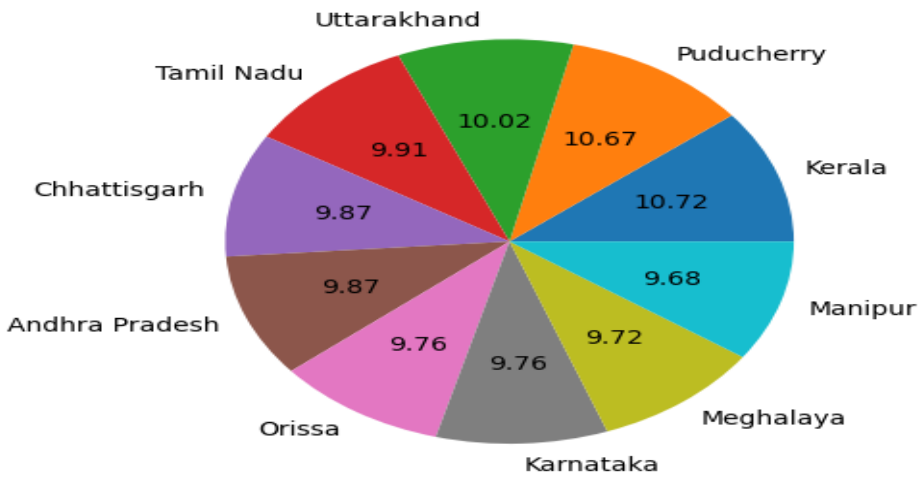
Top 10 states in growth rate
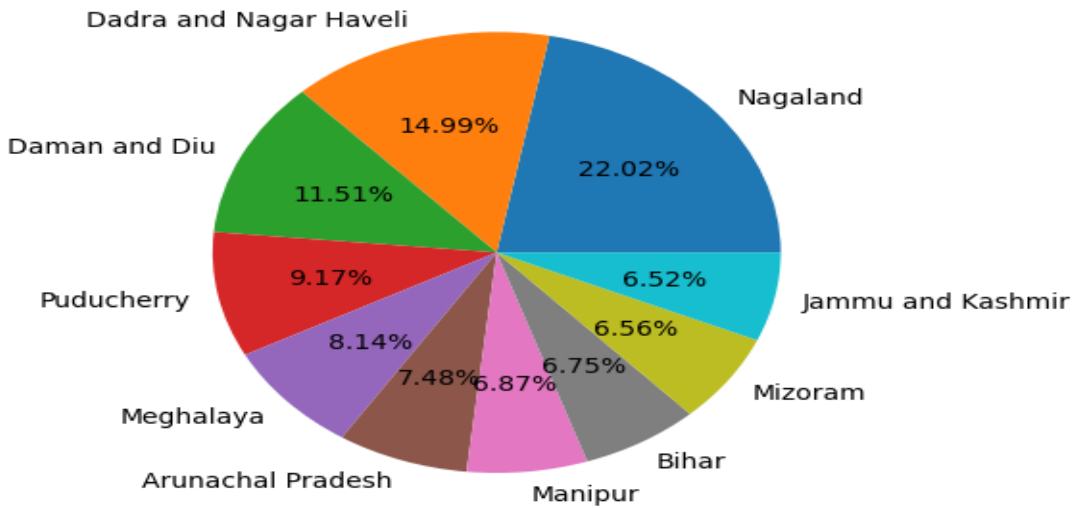
The above visualization displays the top 10 states in terms of growth rate. Three of the most significant states in terms of growth rate are 'Nagaland', 'Dadra and Nagar Haveli', and 'Daman and Diu'.

State-wise sex ratio
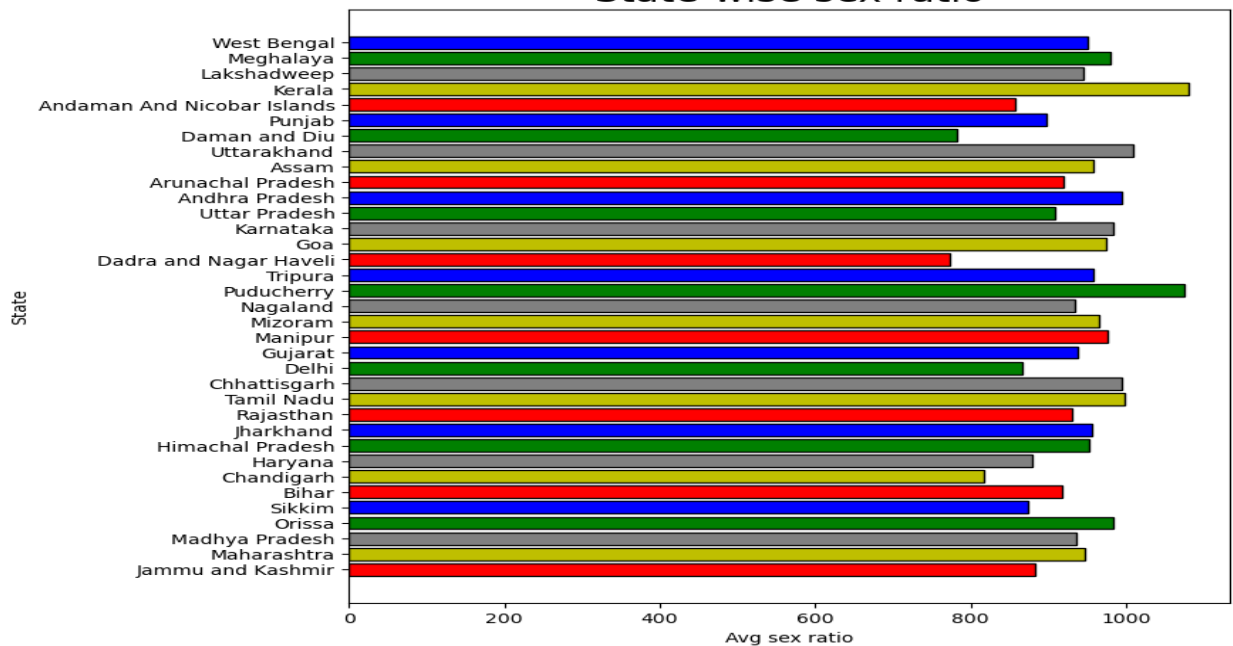
 The above bar graph depicts the sex ratio of each state. From this visualization, it can be concluded that 'Kerala' has the highest sex ratio while 'Dadra and Nagar Haveli' has the lowest.
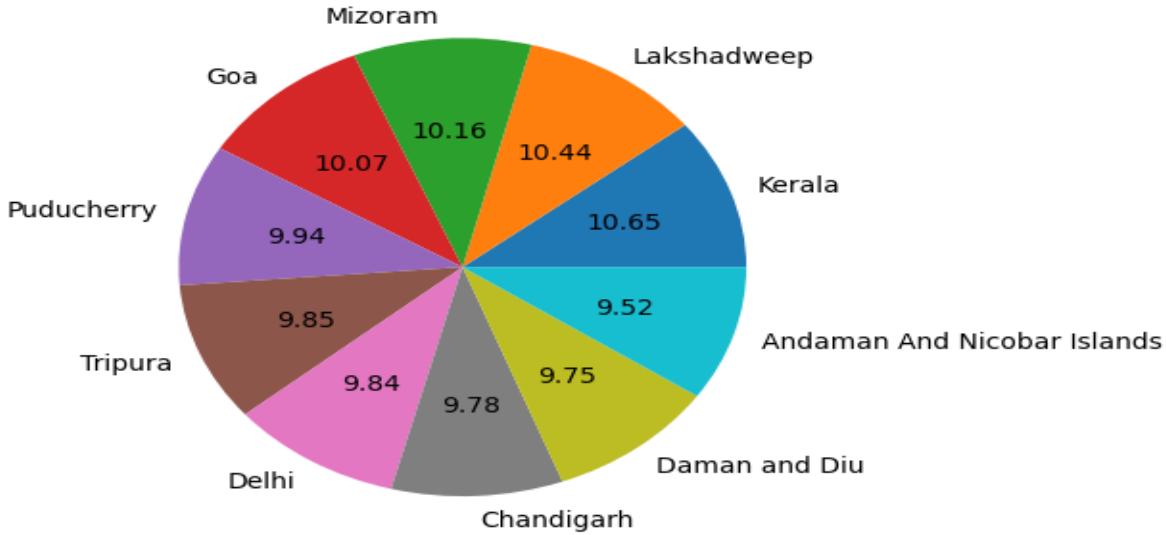
Top 10 states in sex ratio

The above visualization displays the top 10 states in sex ratio. Three of the most significant states in terms of sex ratio are 'Kerala', 'Puducherry', and 'Uttarakhand'.
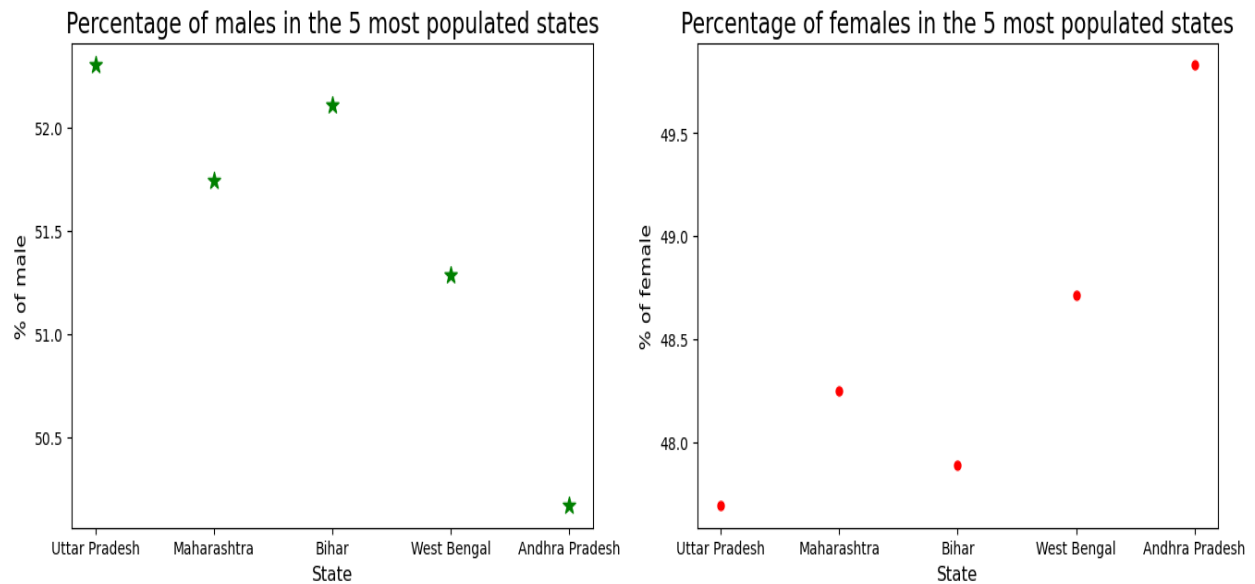

State-wise literacy rate
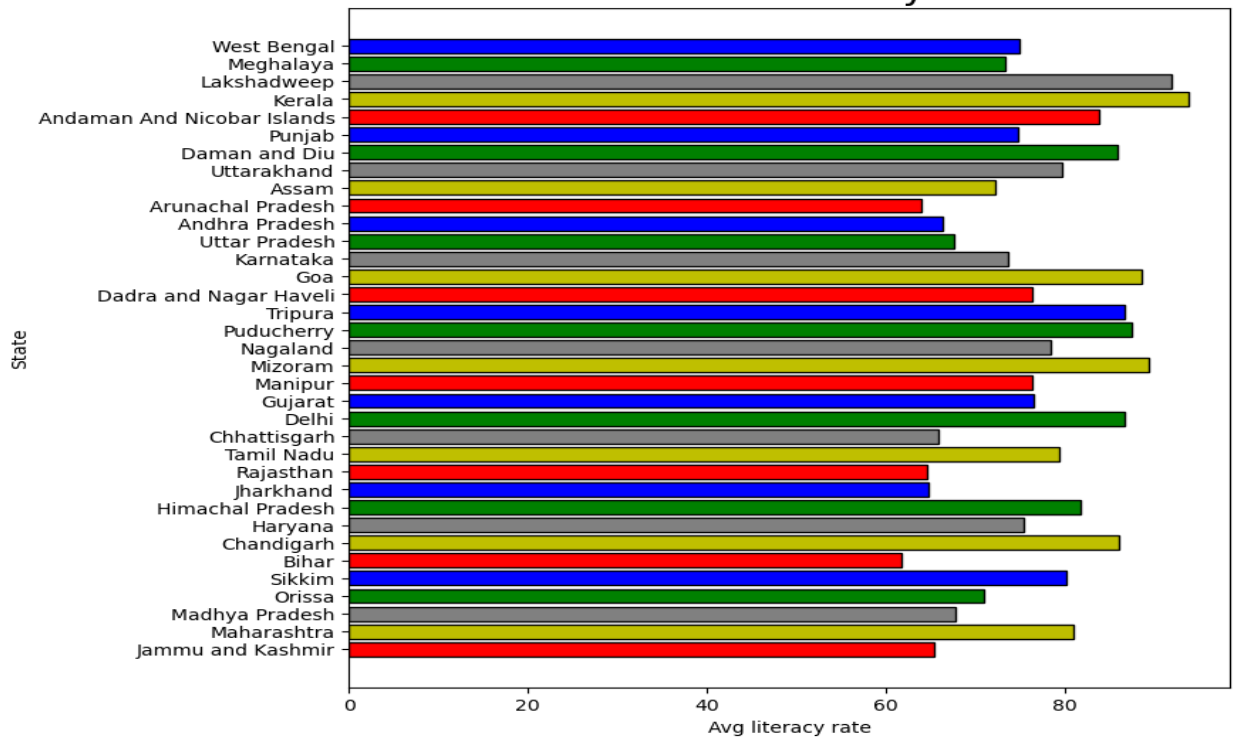
The above bar graph shows that 'Kerala' has the highest literacy rate, while 'Bihar' has the lowest literacy rate.
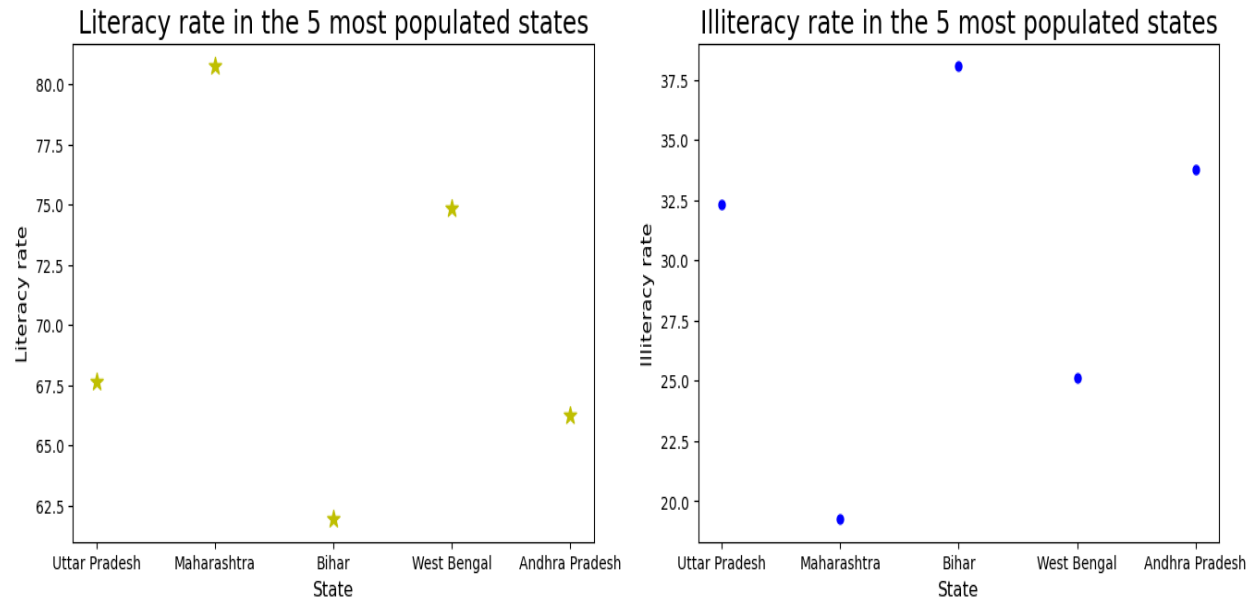
Top 10 states in literacy rate

The above visualization displays the top 10 states in literacy rate. Three of the states with the highest literacy rates are 'Kerala', 'Lakshadweep', and 'Mizoram'.
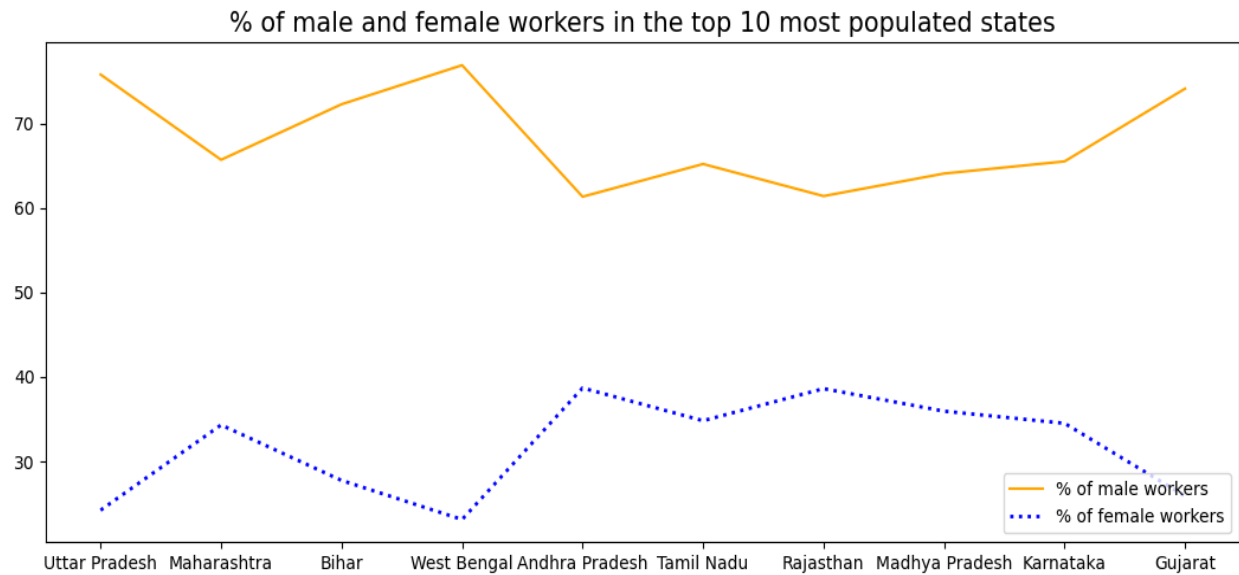

The above visualization depicts the percentage of males and females in the five most populated states. From this visualization, it can be concluded that among these states, 'Uttar Pradesh' has the highest difference in the percentage of males and females, while 'Andhra Pradesh' has the lowest difference in the percentage of males and females.

Literacy rate in the 5 most populated states

Illiteracy rate in the 5 most populated states

The above visualization displays the literacy and illiteracy rates in the five most populated states. From this visualization, it can be said that among these states, 'Maharashtra' has the highest literacy rate, while 'Bihar' has the lowest literacy rate.

% of male and female literates in the top 10 most populated states
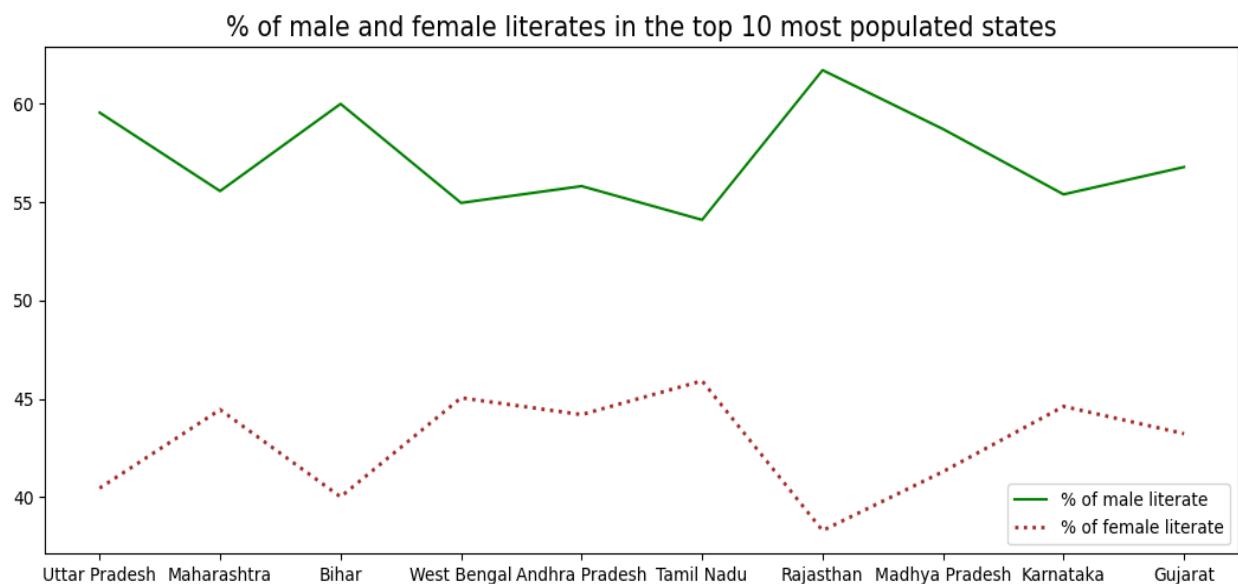
The above visualization depicts the percentage of male and female literates in the ten most populated states. From this visualization, it can be concluded that among these states, 'Rajasthan' has the maximum difference in the percentage of male and female literates, while 'Tamil Nadu' has the minimum difference in male and female literacy percentages.

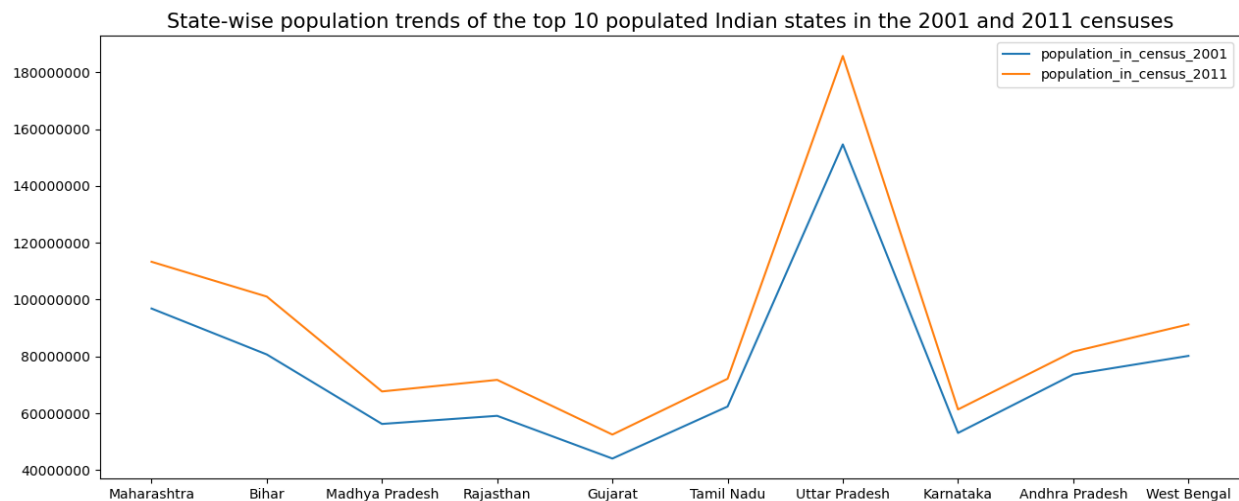**% of male and female workers in the top 10 most populated states**

The above visualization displays the percentage of male and female workers in the ten most populated states. From this visualization, it is observed that among these states, in 'West Bengal' the percentage of male workers is too high compared to the percentage of female workers, whereas in 'Andhra Pradesh' the difference in percentage of male and female workers is the least.

**% of SC and ST in the top 10 most populated states**
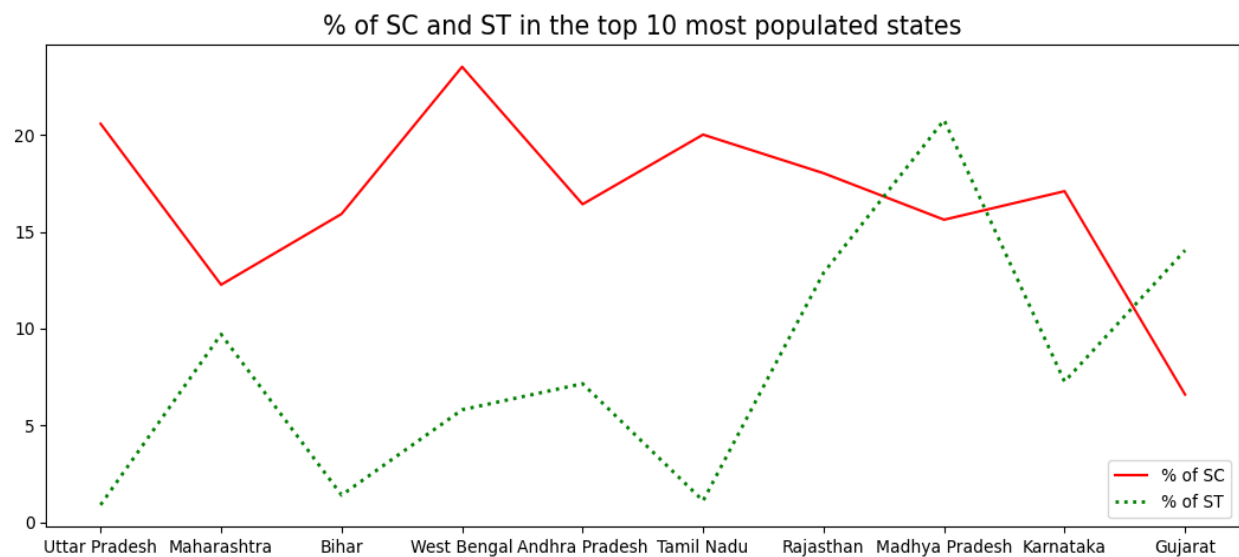
The above graph shows the percentage of Scheduled Caste (SC) and Scheduled Tribe (ST) in the ten most populated states. From this visualization, it is observed that among these states, in 'West Bengal', the percentage of SC is highest, while in 'Madhya Pradesh', the percentage of ST is highest.
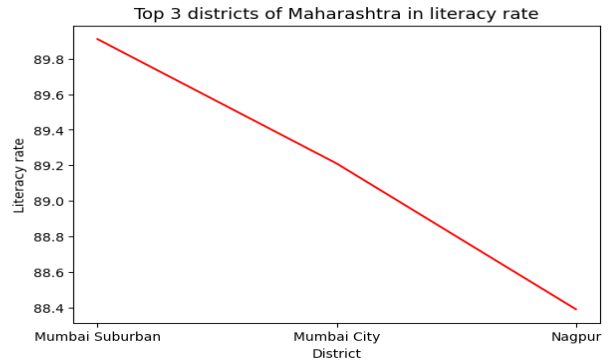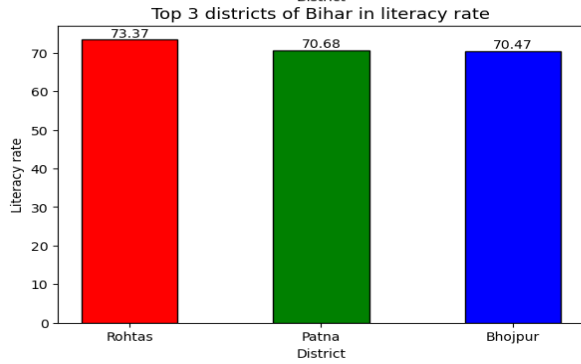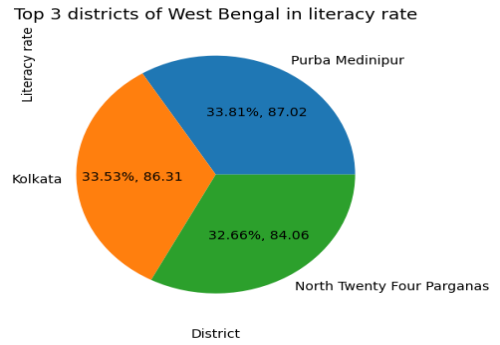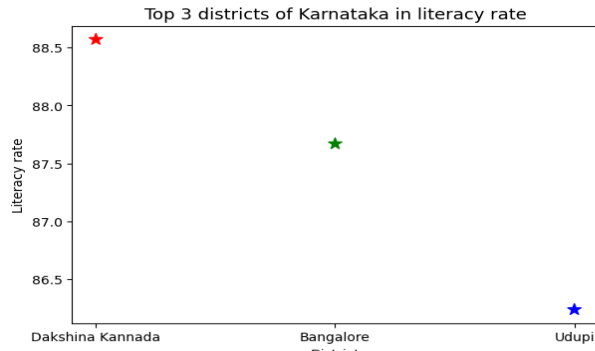
One of the most interesting facts this visualization presents is that among these states, only in 'Madhya Pradesh' and 'Gujarat' is the percentage of ST higher than SC.

State-wise population trends of the top 10 populated Indian states in the 2001 and 2011 censuses
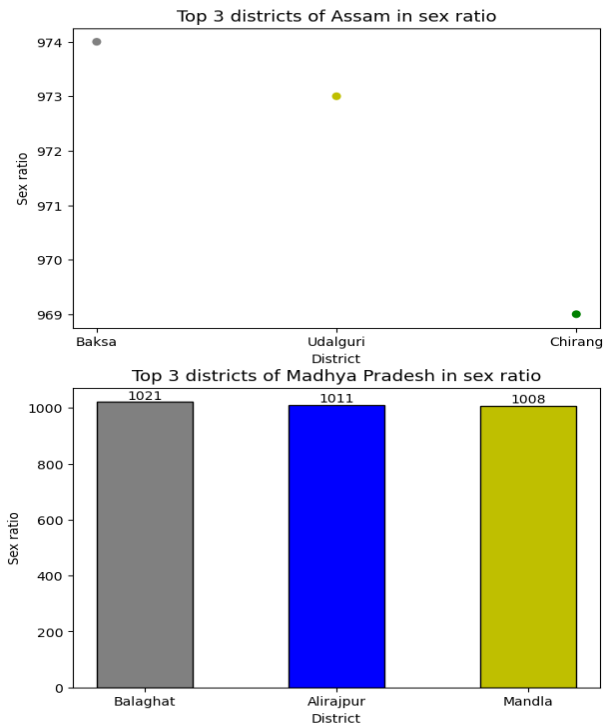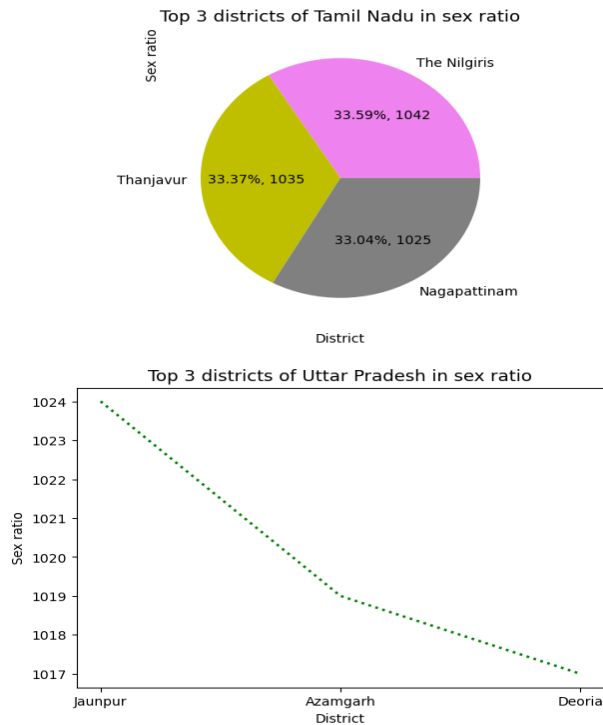
The above visualization depicts the population of the top ten populated states according to the censuses of 2001 and 2011.
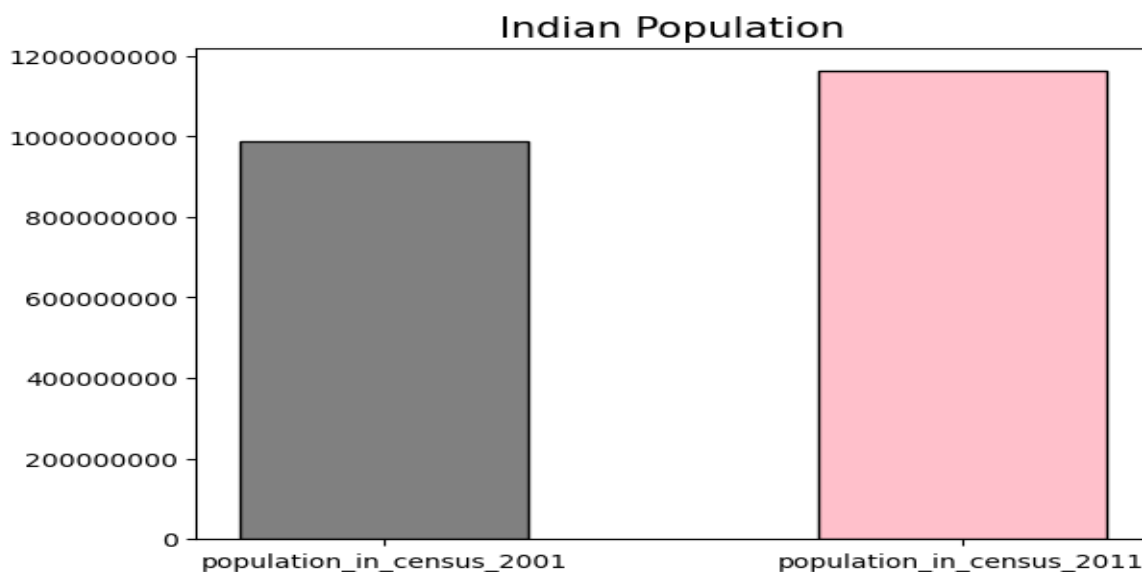

The accompanying bar graph displays the population of India according to the censuses of 2001 and 2011.

Top 3 districts of Karnataka in literacy rate

Top 3 districts of West Bengal in literacy rate

Top 3 districts of Bihar in literacy rate

Top 3 districts of Maharashtra in literacy rate

The above visualizations depict the top three districts of 'Karnataka', 'West Bengal', 'Bihar' and 'Maharashtra' in literacy rate.

Top 3 districts of Tamil Nadu in sex ratio

Top 3 districts of Assam in sex ratio

Top 3 districts of Uttar Pradesh in sex ratio

Top 3 districts of Madhya Pradesh in sex ratio

The above visualizations display the top three districts of 'Tamil Nadu', 'Assam', 'Uttar Pradesh', and 'Madhya Pradesh' in sex ratio.
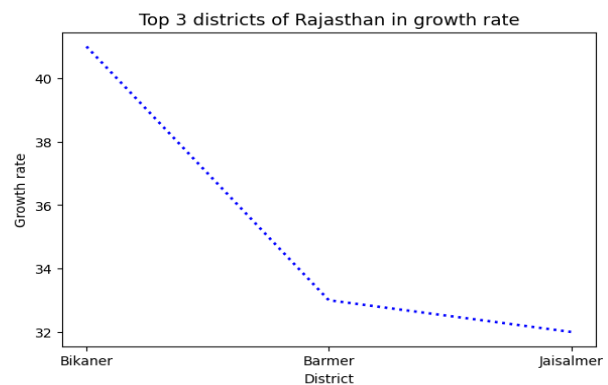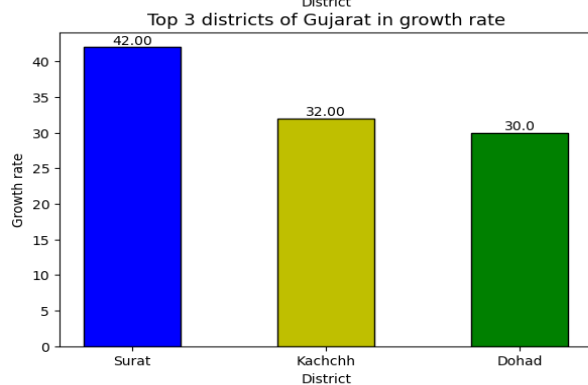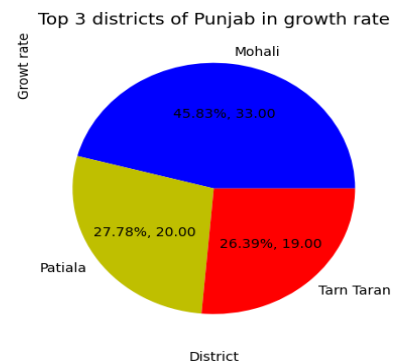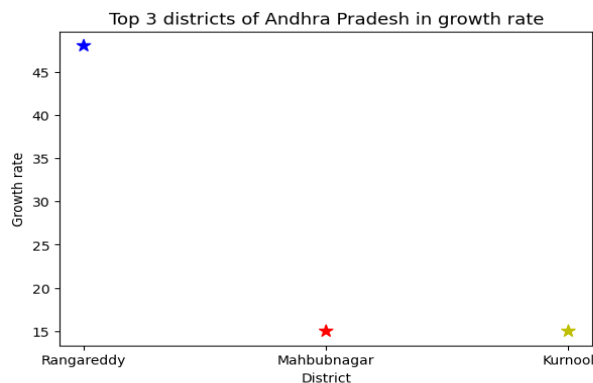
The above visualizations depict the top three districts of 'Andhra Pradesh', 'Punjab', 'Gujarat', and 'Rajasthan' in growth rate.

CONCLUSION

Using SQL and Python, the analysis of Indian Census 2011 data is done, and various insights are drawn from it.