

Executive Summary: India Census 2011 - Exploratory Data Analysis (EDA)

This analysis explores the 2011 Census of India dataset with a focus on understanding population distribution, workforce participation, and educational demographics across states and districts.

Key Highlights of the Analysis:

- 1. Population Distribution:** - Identified top 10 most and least populated states and districts. - Visualized the state-wise and district-wise population using bar and line charts. - Analyzed district code-wise population spread to highlight regional density.
- 2. Religious Demographics:** - Presented the population distribution across different religions, providing insights into religious diversity at national and state levels.
- 3. Age Group Analysis:** - Explored age group distributions, both overall and district-wise. - Focused on age group 0 to 50 for gender-wise breakdown using histograms.
- 4. Workforce Insights:** - Compared male vs male worker and female vs female worker populations across states. - Highlighted non-working male and female numbers per district. - Detailed analysis of working population in Haryana and Uttar Pradesh.
- 5. Gender and Education:** - Analyzed male and female education status, uncovering trends and disparities. - Gender-focused population stats were explored individually for various states.
- 6. Data Quality Checks:** - Checked for null values, duplicate entries, and data types. - Ensured data cleanliness before visualizing or interpreting results.
- 7. Visualizations Included:** - Bar charts, line plots, and histograms for population, workforce, and education. - Comparative charts showcasing state-level differences in demographics.

This analysis provides meaningful insights into India's demographic structure and lays a solid foundation for further policy-level or academic research.