**Analyzing Demographics of Marginal Workers in Tamil Nadu**

Phase-1 Document submission

**1.Introduction:**

The project aims to provide a comprehensive understanding of the age, industrial category and sex distribution among marginal workers and represent this data through visualization.

**2.Project objectives:**

* Demographic Analysis:

The primary objective is to conduct a demographic analysis of marginal workers in Tamil Nadu.

* Age and Gender Distribution:

Explore and visualize the distribution of marginal workers by age and gender to identify patterns.

* Industrial Categories:

Analyze the distribution of marginal workers across different industrial categories.

* Socioeconomic Analysis:

Gain insight into the socioeconomic status of marginal workers based on their demographics.

**3.Analysis Approach:**

* Data Collection
* Data pre-processing
* Exploratory Data Analysis(EDA)
* Demographic Analysis
* Industrial Category Analysis
* Socioeconomic Insights
* Visualizations
* Data Collection:

**Dataset Link:**[**https://tn.data.gov.in/resource/marginal-workers-classified-age-industrial-category-and-sex-scheduled-caste-2011-tamil**](https://tn.data.gov.in/resource/marginal-workers-classified-age-industrial-category-and-sex-scheduled-caste-2011-tamil)

* Data pre-processing:
* Clean the data.
* Pre-process the data.
* Handling the missing values.
* Format the data for analysis.
* Exploratory Data Analysis(EDA):

Calculate basic statistics such as mean, medians and standard deviation.

* Demographic analysis:
* Segment the dataset by age and gender to calculate distributions and percentage.
* Visualize this information using appropriate charts and graphs.
* Industrial Category Analysis:
* Categorize workers by their respective industries.
* Explore the distribution of workers among these categories and create visualizations to represent this distribution.
* Socioeconomic Insights:

Analyze the data to draw insights into the socioeconomic status of marginal workers.

* Visualizations:

Select suitable visualization types based on the nature of the data.

Example: Bar chart for age and gender distribution, pie charts for industry categories.

**4. visualization Selection:**

* Age and Gender Distribution:

Bar charts: Use bar chart to display the distribution of marginal workers by age and gender.

* Industrial Categories:

Pie charts: create a pie chart to represent the percentage of marginal workers in different industrial categories, highlighting the most prominent sector.

* Socioeconomic Insights:

Heat maps: Use heat maps to visualize correlations between age, gender and industrial category, providing a comprehensive view of the socioeconomic landscape.

**5.Conclusion:**

This aims to analyze the demographic characteristics of marginal workers in Tamil Nadu. By defining clear objectives, outlining the analysis approach, and selecting appropriate visualization, we will work towards a comprehensive understanding of this important demographic group.