ASSESSMENT OF MARGINAL WORKERS IN TAMILNADU

ABSTRACT

This project involves a socioeconomic analysis of marginal workers in Tamil Nadu, India focusing on age, industrial category, and gender. Using Python and data visualization tools, the study aims to unveil insights into this demographic's distribution. By employing visualizations like bar and pie charts, it presents a clear snapshot of their characteristics. This analysis serves as a valuable resource for policymakers and stakeholders to understand and address the socioeconomic dynamics of marginal workers, potentially leading to improved living conditions and employment opportunities.

DESIGN THINKING

Our Project Objectives:

1. **Analyzing Marginal Worker Demographics:** We aim to understand the characteristics of marginal workers, including their ages, genders, and the industries they work in.

2. **Understanding Age Distribution:** We'll dig into the age distribution of these workers to spot any notable trends or patterns.

3. **Exploring Gender Distribution:** We want to investigate how gender is distributed among marginal workers and whether there are any disparities.

4. **Exploring Industrial Categories:** We'll categorize marginal workers based on the industries they're employed in and assess any concentrations or variations.

OUR ANALYSIS APPROACH:

1. **Data Collection:** We'll start by collecting a comprehensive dataset that contains information about marginal workers, including their ages, genders, and types of work they do.

2.**Data Cleaning:** Next, we'll clean up the dataset to handle any missing values, outliers, or inconsistencies, ensuring our data is accurate and consistent.

3.Descriptive Statistics:

In our descriptive statistics, we employ Principal Component Analysis (PCA), a Machine Learning technique. PCA simplifies data while highlighting how age, gender, and industrial work interrelate. It identifies crucial variables, gauges their influence on data variance, and provides visual insights through biplots, enhancing our understanding of marginal worker demographics.

In this project, we use Python and Principal Component Analysis (PCA) to analyze marginal workers. Python facilitates data handling, while PCA helps uncover underlying patterns and relationships within the demographic data of these workers, enhancing our analysis.

VISUALIZATION

For visualizing all three parameters (age, gender, and industrial work) in one comprehensive view, we employ interactive dashboards created with data visualization tools like Tableau or Power BI. These dashboards offer an intuitive and dynamic way to explore the demographics of marginal workers, providing insights into age distribution, gender ratios, and industrial categorization simultaneously.