

Problem Statement

Mentorship Internship Program



Abstract:

This project delves into the analysis of data related to the National Rural Employment Guarantee Act (NREGA), a transformative government scheme aimed at providing rural households with guaranteed wage employment opportunities. The dataset used for this analysis encompasses a wide range of parameters, including the number of job cards issued, the workforce engaged, budget allocation, work completion statistics, and much more. Through the application of data analytics techniques, we aim to gain valuable insights into the implementation and impact of NREGA across different states and districts in India.

Problem Statement:

NREGA is a vital initiative to alleviate rural unemployment and poverty. This project seeks to address several key questions and challenges associated with NREGA:

- How effective is NREGA in providing employment opportunities to rural households?
- Are there regional disparities in the implementation and outcomes of the scheme?
- What is the utilization of the allocated budget, and how does it correlate with employment generation?
- What are the key factors contributing to the completion of NREGA works, and are there any roadblocks to its success?
- Can data-driven insights guide policymakers and administrators in optimizing the scheme's impact?

Dataset Information:

The dataset used for this analysis is sourced from official government records and contains information related to NREGA implementation across various states and districts in India. It comprises 28 columns, encompassing data on job cards, worker details, budget allocation, work completion statistics, expenditure, and more. This dataset offers a comprehensive view of the progress and challenges faced by the NREGA program.

Variable Description:

The dataset consists of the following variables:

- state_name: Name of the Indian state.
- district_name: Name of the district within the state.
- Total No. of JobCards issued: The total number of job cards issued to rural households.
- Total No. of Workers: The total number of workers registered under NREGA.
- Total No. of Active Job Cards: The number of active job cards at a given point in time.
- Total No. of Active Workers: The number of workers currently engaged in NREGA works.
- SC workers against active workers: The count of Scheduled Caste workers among active workers.
- ST workers against active workers: The count of Scheduled Tribe workers among active workers.
- Approved Labour Budget: The budget allocated for labor under NREGA.

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- Persondays of Central Liability so far: The total persondays of employment provided, considering central liability.
- SC persondays: Persondays of employment provided to Scheduled Caste workers.
- ST persondays: Persondays of employment provided to Scheduled Tribe workers.
- Women Persondays: Persondays of employment provided to women.
- Average days of employment provided per Household: The average number of days of employment provided per rural household.
- Average Wage rate per day per person(Rs.): The average daily wage rate per NREGA worker in Indian Rupees.
- Total No of HHs completed 100 Days of Wage Employment: The number of households completing 100 days of wage employment.
- Total Households Worked: The total number of households involved in NREGA works.
- Total Individuals Worked: The total number of individuals engaged in NREGA works.
- Differently abled persons worked: The count of differently abled persons who participated in NREGA works.
- Number of GPs with NIL exp: The number of Gram Panchayats with zero expenditure.
- Total No. of Works Takenup (New+Spill Over): The total number of works initiated, including new projects and spill-over from previous periods.
- Number of Ongoing Works: The count of works that are currently in progress.
- Number of Completed Works: The count of works that have been successfully completed.
- % of NRM Expenditure(Public + Individual): The percentage of expenditure on Natural Resource Management (NRM) projects, including both public and individual contributions.
- % of Category B Works: The percentage of expenditure on Category B works.
- % of Expenditure on Agriculture & Agriculture Allied Works: The percentage of expenditure on agriculture and allied activities.
- Total Exp(Rs. in Lakhs.): Total expenditure in Indian Rupees (in lakhs).
- Wages(Rs. In Lakhs): Expenditure on wages in Indian Rupees (in lakhs).
- Material and skilled Wages(Rs. In Lakhs): Expenditure on materials and skilled wages in Indian Rupees (in lakhs).
- Total Adm Expenditure (Rs. in Lakhs): Total administrative expenditure in Indian Rupees (in lakhs).

Scope:

- This project aims to analyze and visualize the NREGA dataset to extract meaningful insights. The scope includes:
- Data preprocessing and cleaning to ensure data quality.

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- Exploratory data analysis (EDA) to identify patterns, trends, and disparities in NREGA implementation.
- Utilizing data visualization techniques to present key findings effectively.
- Drawing actionable insights to inform policymakers and administrators about the strengths and weaknesses of the NREGA program.

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- Suggesting data-driven recommendations for optimizing the impact of NREGA in different regions.

Learning Outcome:

- By the conclusion of this project, participants will have acquired valuable skills in:
- Data cleaning and preprocessing techniques for government datasets.
- Data analysis and visualization using appropriate tools.
- Identifying trends and disparities in government scheme implementation.
- Communicating findings and insights to stakeholders effectively.
- Contributing to data-driven policy recommendations for improving the NREGA program's outcomes and efficiency.

This project offers an opportunity to engage with real-world data related to a significant government initiative and contribute to the broader understanding of its impact on rural employment and livelihoods.