

INTRODUCTION TO DATA MANAGEMENT
PROJECT REPORT

(Project Semester January-April 2025)

MGNREGA District-Wise Distribution

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Section : K23PM

Course Code : INT217

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CERTIFICATE

This is to certify that **Anish Malu** bearing Registration no.**12311673** has completed **INT217**. project **MANREGA District-Wise Distribution** under my guidance and supervision. To the best of my knowledge, the present work is the result of his original development, effort and study.

Maneet Kaur

Assistant Professor

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Date: 12 April 2025

DECLARATION

I, Anish Malu, student of B.Tech Computer Science under CSE/IT Discipline at, Lovely Professional University, Punjab, hereby declare that all the information furnished in this project report is based on my own intensive work and is genuine.

Date: 12 April 2025



Registration No. 12311673

Anish Malu

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to all those who supported me in the successful completion of this project titled "MGNREGA District-Wise Distribution Dashboard".

First and foremost, I would like to thank my faculty/mentor [Insert Name] for their valuable guidance, encouragement, and feedback throughout the course of this project. Their insights were instrumental in shaping my understanding and approach towards data visualization and analysis.

I would also like to acknowledge the sources of data and the efforts of the Ministry of Rural Development for providing transparent and accessible information related to MGNREGA, which served as the backbone for my analysis.

Finally, I am thankful for the tools and technologies like Microsoft Excel, which enabled me to create an interactive and informative dashboard that visually represents the district-wise distribution of work, expenditure, and participation under the MGNREGA scheme.

This project has significantly enhanced my skills in data analytics and visualization, and I am grateful for the learning experience it provided.

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1 INTRODUCTION:

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) represents one of India's most significant social security initiatives, designed to enhance livelihood security in rural areas. Enacted in 2005, this program guarantees 100 days of wage employment in a financial year to every rural household whose adult members volunteer for unskilled manual work. Beyond employment generation, MGNREGA aims to create sustainable rural infrastructure, strengthen grassroots processes of democracy, and foster social equity.

Punjab, primarily known as an agriculturally prosperous state, presents an interesting case for MGNREGA implementation. Despite its agricultural advancement, the state faces challenges like seasonal unemployment, declining groundwater levels, and socioeconomic disparities. MGNREGA serves as a crucial safety net for rural households during agricultural off-seasons and for landless laborers throughout the year.

This report presents a comprehensive district-wise analysis of MGNREGA implementation across Punjab's 23 districts during the financial year 2024-2025. The study aims to evaluate the program's effectiveness through multiple dimensions:

1. Analyzing the breakdown of expenditure across different categories
2. Assessing the status of work completion and ongoing projects
3. Evaluating the average employment days generated per household
4. Examining wage rate variations across districts
5. Understanding the distribution of workers across scheduled caste and scheduled tribe categories

Through this multidimensional analysis, the report seeks to identify implementation patterns, highlight best practices, recognize challenges, and suggest potential areas for improvement in MGNREGA's execution in Punjab.

2. Source of Dataset:

The data utilized in this analysis is sourced from the MGNREGA Management Information System (MIS), the official digital platform that captures real-time implementation details of the program nationwide. The dataset covers the financial year 2024-2025, with particular emphasis on the month of March, providing a snapshot of program implementation across all 23 districts of Punjab.

The MGNREGA MIS is maintained by the Ministry of Rural Development, Government of India, and is recognized for its comprehensive documentation of program implementation details. Data is collected through a standardized procedure where implementation agencies at the gram panchayat, block, and district levels enter real-time information about works, employment generated, and expenditures incurred.

The dataset includes various parameters critical for analysis:

- District-wise active worker distribution (48,398K workers across 23 districts)
- Expenditure categorization (wages, material costs, administrative expenses)
- Work status (completed versus ongoing)
- Employment days generated per household
- Wage rates per person per day
- Social category distribution of workers (SC/ST)
- Labor budget approvals and utilization

Data Preprocessing Methods in Excel

Remove Duplicates

- ◊ Data → Removed Duplicates
- ◊ Ensures uniqueness and avoids repetition in data entries.

Handle Missing Values

- ◊ Identify blanks or “NA” and either:
 - Fill with mean/median (for numbers)
 - Use “N/A” or “Unknown” (for text)
 - Or delete the row if necessary

Trim Extra Spaces

- ◊ Formula: =TRIM(A2)
- ◊ Removes unwanted spaces that can break formulas or cause mismatch.

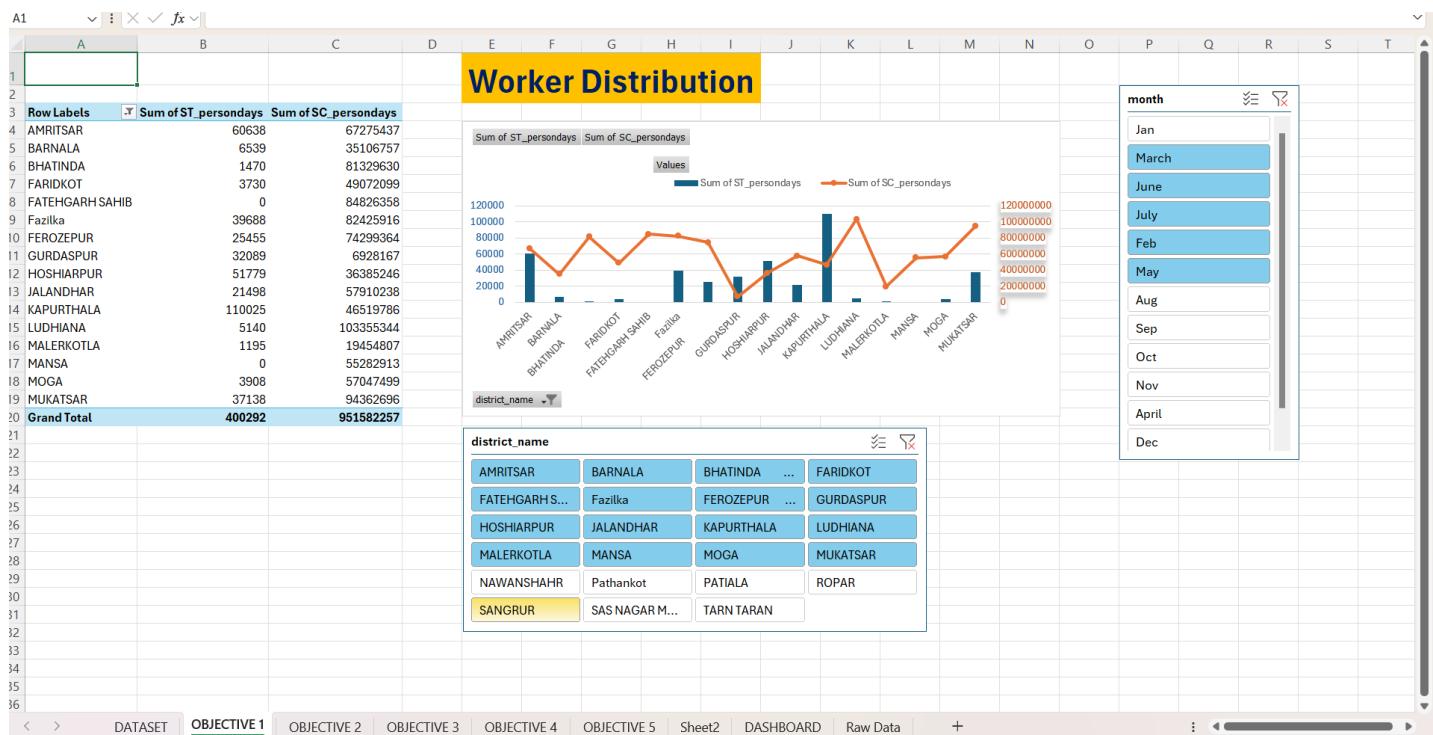
Standardize Text

- ◊ Use =UPPER(), =LOWER(), =PROPER()
- ◊ Keeps your data consistent (e.g., “male” vs “Male” vs “MALE”).

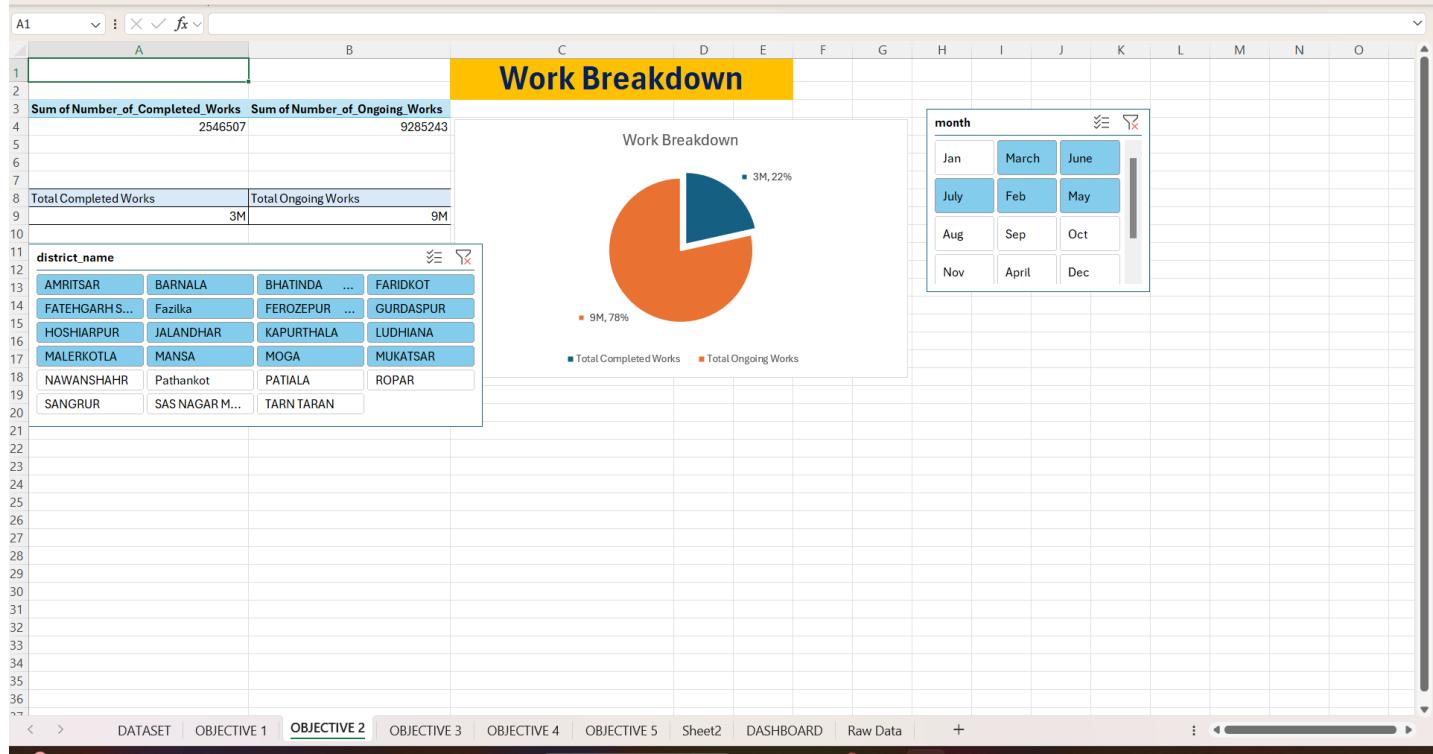
Fix Inconsistent Categories

- ◊ Use IF() or VLOOKUP()
- ◊ Converts values like “M”, “m”, “Male” all into one standard label.

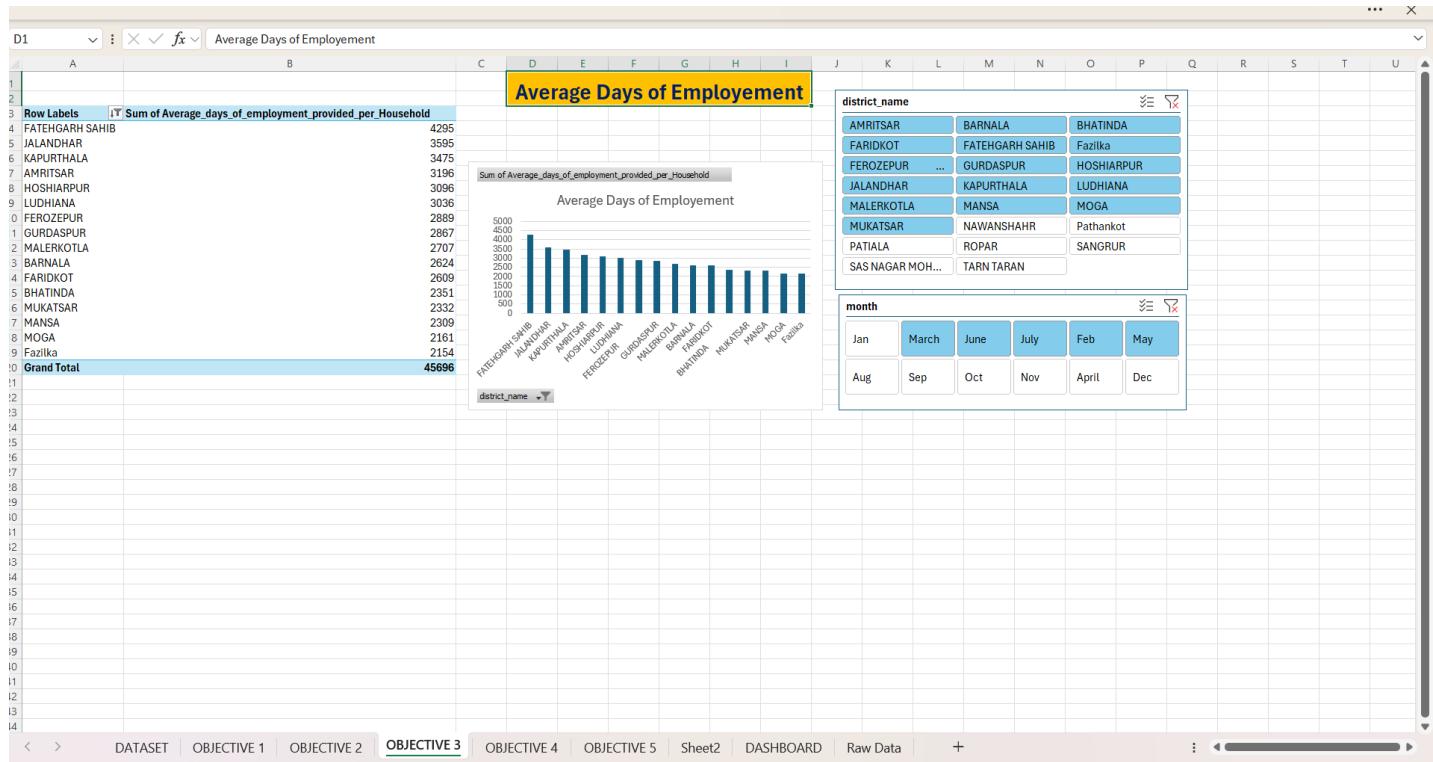
OBJECTIVE 01:



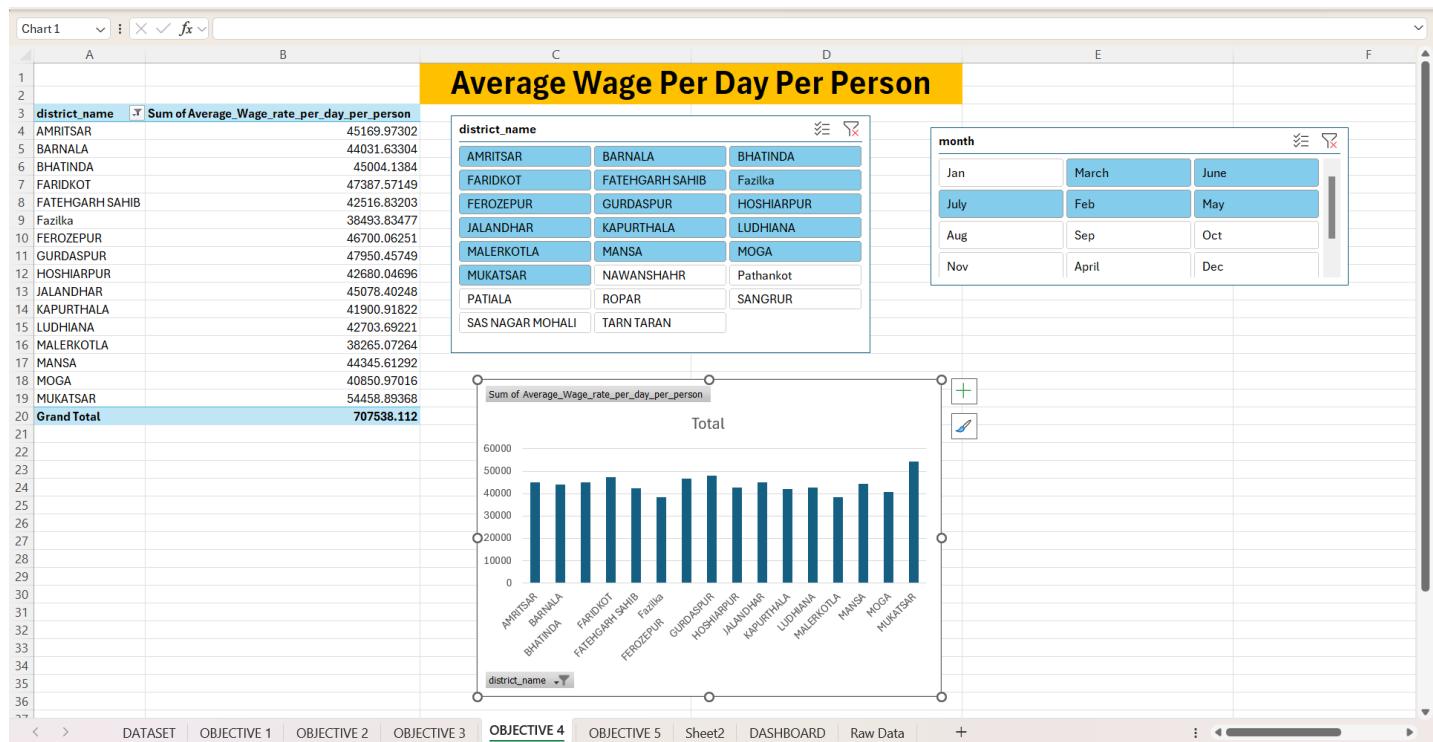
OBJECTIVE : 02



OBJECTIVE : 03



OBJECTIVE : 04



OBEJCTIVE : 05

Expenditure Breakdown

Sum of Wages	Sum of Material_and_skilled_Wages	Sum of Total_Adm_Expenditure
40,50,657	12,77,469	1,44,633

SUM OF WAGES: 40,50,657
MATERIAL AND SKILLED...: 12,77,469
TOTAL ADM EXPENDITURE: 1,44,633

month	Jan	March	June
July	Feb	May	
Aug	Sep	Oct	
Nov	April	Dec	

district_name	AMRITSAR	BARNALA	BHATINDA	FARIDKOT	FATEHGARH SAHIB	Fazilka	FEROZEPUR	GURDASPUR
HOSHIARPUR	JALANDHAR	KAPURTHALA	LUDHIANA	MALERKOTLA	MANSA	MOGA	MUKATSAR	
NAWANSHAHR	Pathankot	PATIALA	ROPAR	SANGRUR	SAS NAGAR MOHALI	TARN Taran		

DATASET | OBJECTIVE 1 | OBJECTIVE 2 | OBJECTIVE 3 | OBJECTIVE 4 | **OBJECTIVE 5** | Sheet2 | DASHBOARD | Raw Data | +

DASHBOARD:

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) District-wise Distribution

District	State	Total Districts	Total No of Active Workers	Average days of employment provided per Household	Average Wage rate per day per person
AMRITSAR	Punjab	23	183626K	45,696	708K
BARNALA					
BHATINDA					
FARIDKOT					
FATEHGARH SAHIB					
Fazilka					
FEROZEPUR					
GURDASPUR					
HOSHIARPUR					
JALANDHAR					
KAPURTHALA					
LUDHIANA					
MALERKOTLA					
MANSA					
MOGA					
MUKATSAR					
NAWANSHAHR					
Pathankot					
PATIALA					
ROPAR					
SANGRUR					
SAS NAGAR MOHALI					
TARN Taran					

OBJECTIVE 1 | OBJECTIVE 2 |
OBJECTIVE 3 | OBJECTIVE 4 |
OBJECTIVE 5 | CLEANED DATASET |

11832K **2547K**
Total Works Taken Total Works Completed

55772K **47776K**
Total Individuals Worked Total Households Worked

4,00,292 **951582K**
Total ST workers Total SC workers

Sum of ST_persondays Sum of SC_persondays

Jan March June July Feb May Aug Sep Oct Nov April Dec

DATASET | OBJECTIVE 1 | OBJECTIVE 2 | OBJECTIVE 3 | OBJECTIVE 4 | OBJECTIVE 5 | Sheet2 | DASHBOARD | Raw Data | +

CONCLUSION:

This project demonstrates the power of Excel in handling real-world datasets and building dynamic dashboards for data analysis. The MGNREGA Dashboard for Punjab 2024–25 provides valuable insights into employment generation, fund utilization, and social equity outcomes. From macro-level summaries to district-wise deep dives, the dashboard is designed to support data-driven governance and transparent decision-making.

6. Future Scope

- Real-time integration with government APIs for live monitoring
- Expansion to other states for comparative MGNREGA performance analysis
- Use of Power BI or Tableau for web-based interactive visualizations
- Incorporation of forecasting using Excel's advanced analytics or ML models
- Embedding macros to automate data refresh, navigation, and reporting

7. References

1. Government of India Open Data Portal – <https://data.gov.in>
2. MGNREGA Official Website – <https://nrega.nic.in>

LINKS :

GITHUB : [CLICK HERE :](#)

LinkdIn : [For Visualisation Click here:](#)

