

# **INTRODUCTION TO DATA MANAGEMENT**

## **PROJECT REPORT**

(Project Semester January-April2025)

# **MGNREGA DISTRICT-WISEDISTRIBUTION**

Submitted by:

Name: Riya Kumari

Registration No: 12318448

Programme: B.Tech.(Computer Science and Engineering)

Section: K23SK

Course Code: INT217

Under the Guidance of:

Aashima

UID :28968

Assistant Professor

**Discipline of CSE/IT**

**Lovely School of Computer Science**

**Lovely Professional University, Phagwara**

## **CERTIFICATE**

This is to certify that **Riya Kumari** bearing Registration no. **12318448** has completed **INT217** project titled, **“MGNREGA District-wise Distribution”** under my guidance and supervision. To the best of my knowledge, the present work is the result of her original development, effort and study.

Aashima

Assistant Professor

**School of Computer Science**

**Lovely Professional University**

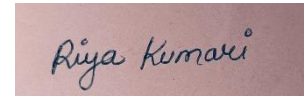
**Phagwara, Punjab.**

Date: 12 April 2025

### **DECLARATION**

I, Riya Kumari, student of B.Tech.(Computer Science and Engineering 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

A rectangular box containing a handwritten signature in blue ink that reads "Riya Kumari".

Registration No. 12318448

**Riya Kumari**

## **ACKNOWLEDGEMENT**

I would like to express my heartfelt gratitude to all those who supported and guided me throughout the completion of this project titled “**MGNREGA Data Analysis and Interactive Dashboard Using Microsoft Excel**”.

First and foremost, I sincerely thank **Ashima Bansal**, my project guide and faculty mentor at **Lovely Professional University (LPU)**, for her valuable insights, continuous support, and constructive feedback, which played a vital role in the successful execution of this project.

I also extend my appreciation to the **Department of Computer Science**, LPU, for providing me with the resources and an excellent academic environment to carry out this work.

Lastly, I would like to thank my peers, friends, and family for their encouragement, timely suggestions, and moral support throughout this journey.

This project has not only enhanced my technical skills in Excel but also deepened my understanding of data-driven analysis and its real-world applications in governance and public welfare.

# **TABLE OF CONTENT**

1. Introduction
2. Source of dataset
3. Dataset Preprocessing
4. Analysis on dataset (for each objective)
  - i. General Description
  - ii. Specific Requirements
  - iii. Analysis results
  - iv. Visualization
5. Conclusion
6. Future scope
7. References

# 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 labourers 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. Analysing 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

### **3. Data Preprocessing Methods in Excel**

#### **Remove Duplicates**

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

#### **Handled Missing Values**

Identify blanks or “NA” and either:

- Filled with mean/median (for numbers)
- delete the row if necessary

#### **Trim Extra Spaces**

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

#### **Standardized Text**

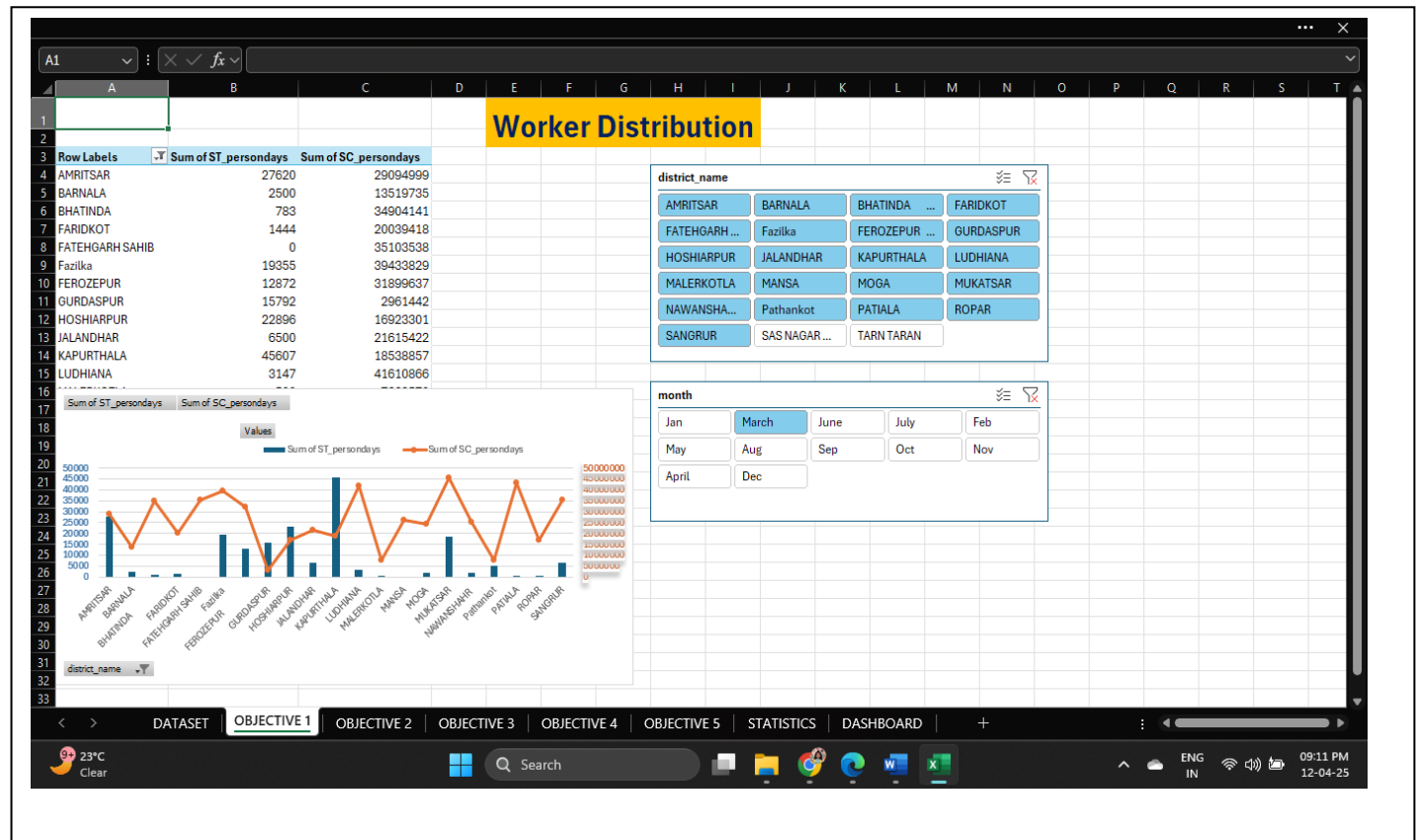
- Use =UPPER(), =LOWER(), =PROPER()
- Keeps your data consistent (e.g., “male” vs “Male” vs “MALE”).

#### **Fixed Inconsistent Categories**

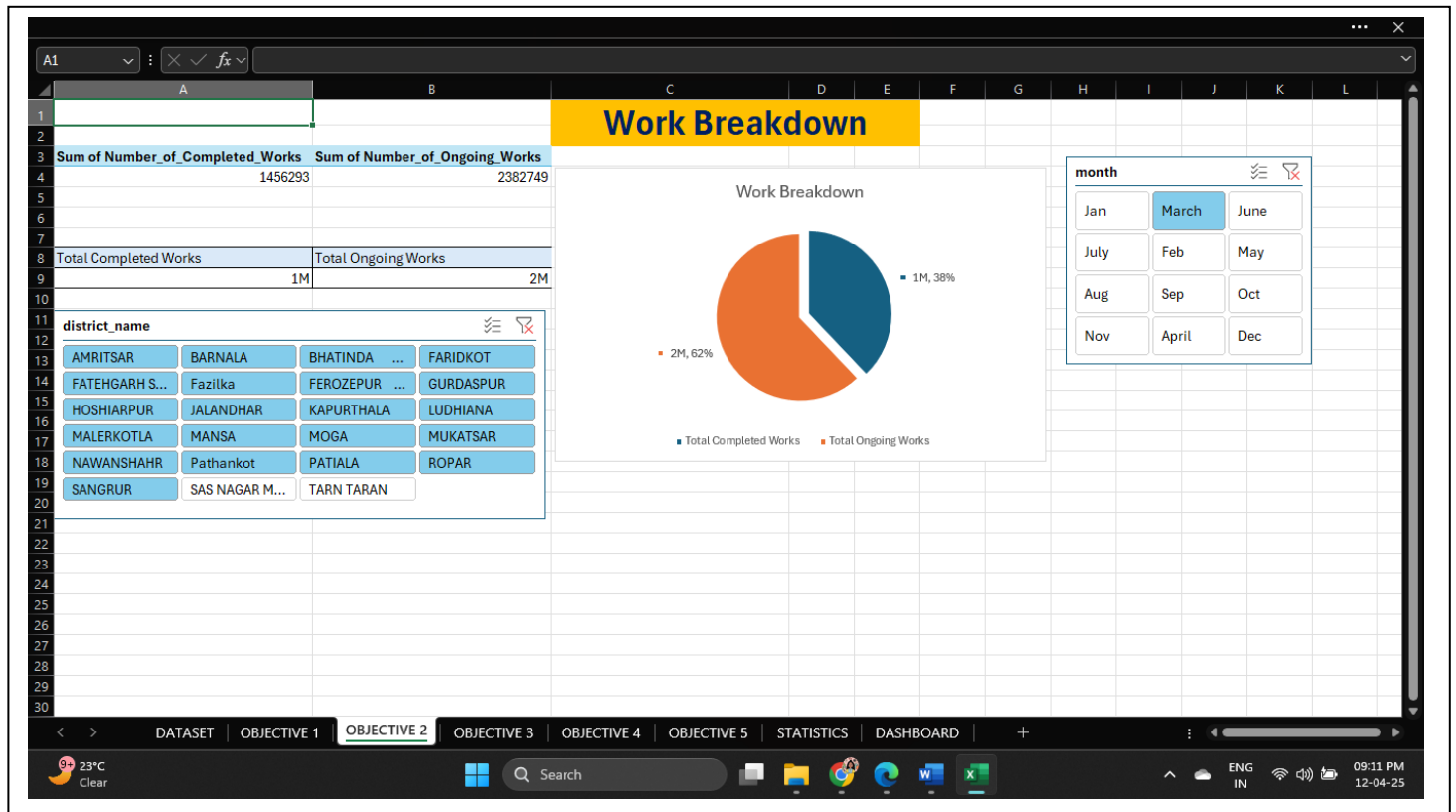
- Used IF() or VLOOKUP()
- Converted values like “M”, “m”, “Male” all into one standard label.



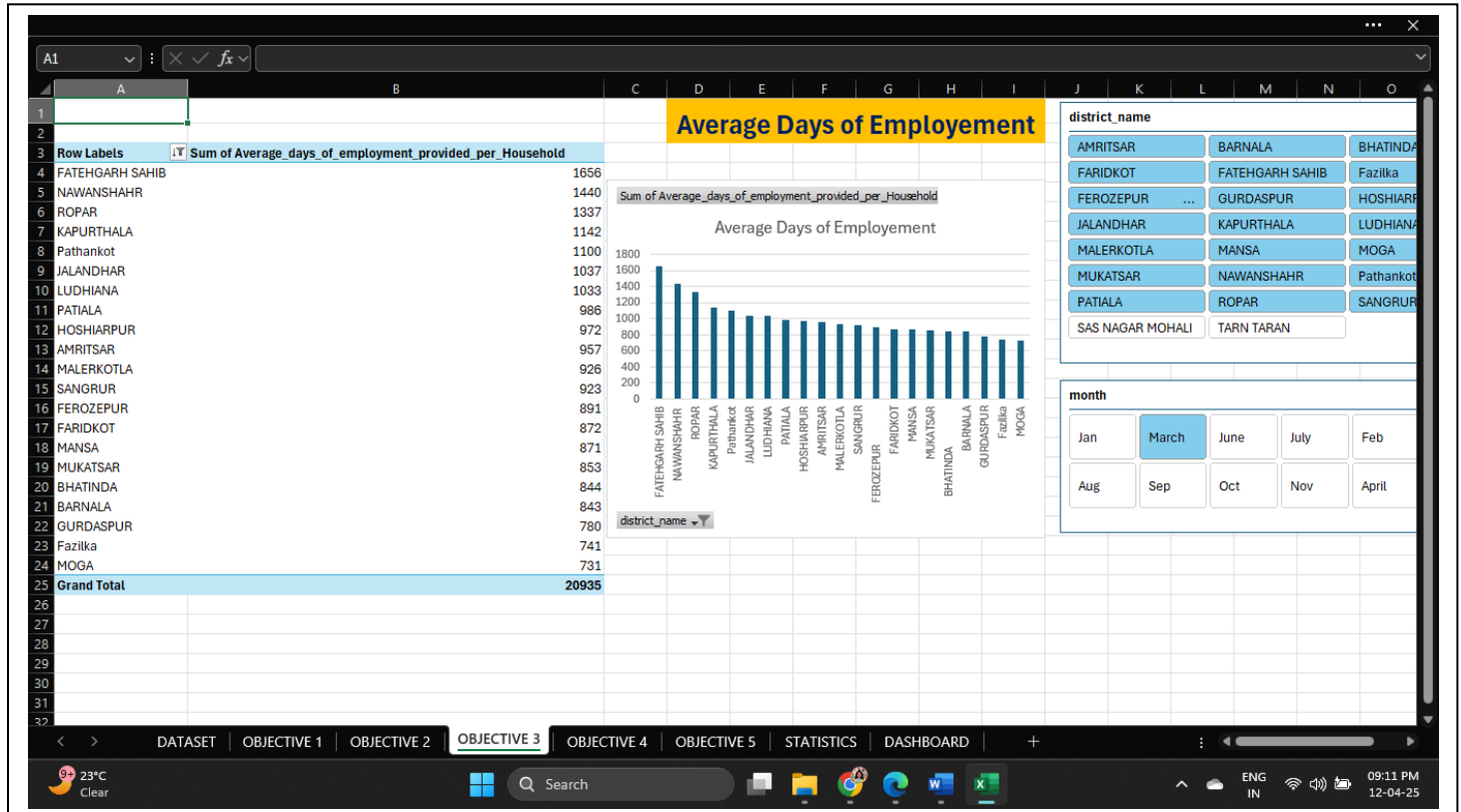
## OBJECTIVE 1: Worker Distribution



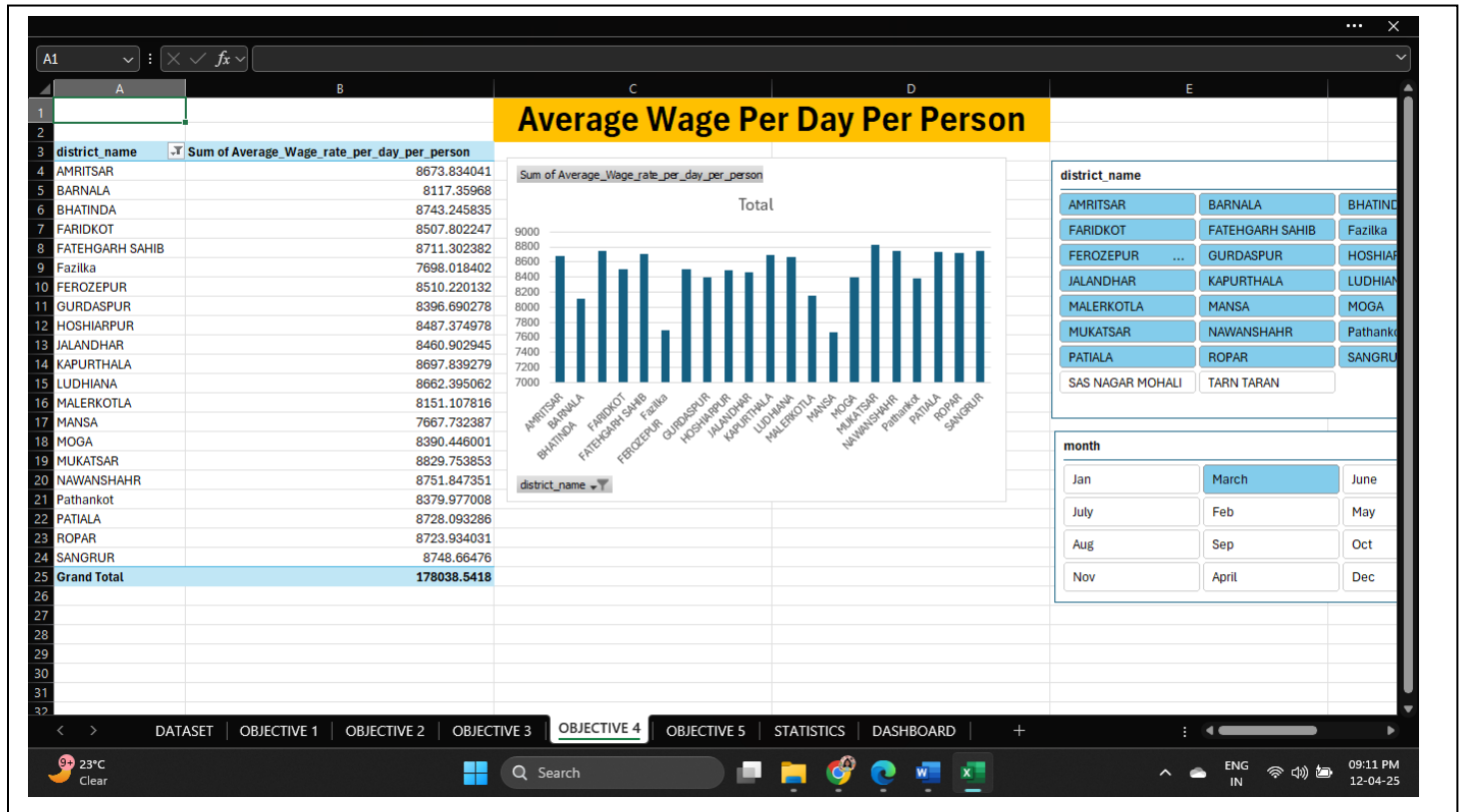
## OBJECTIVE 2: Work Breakdown



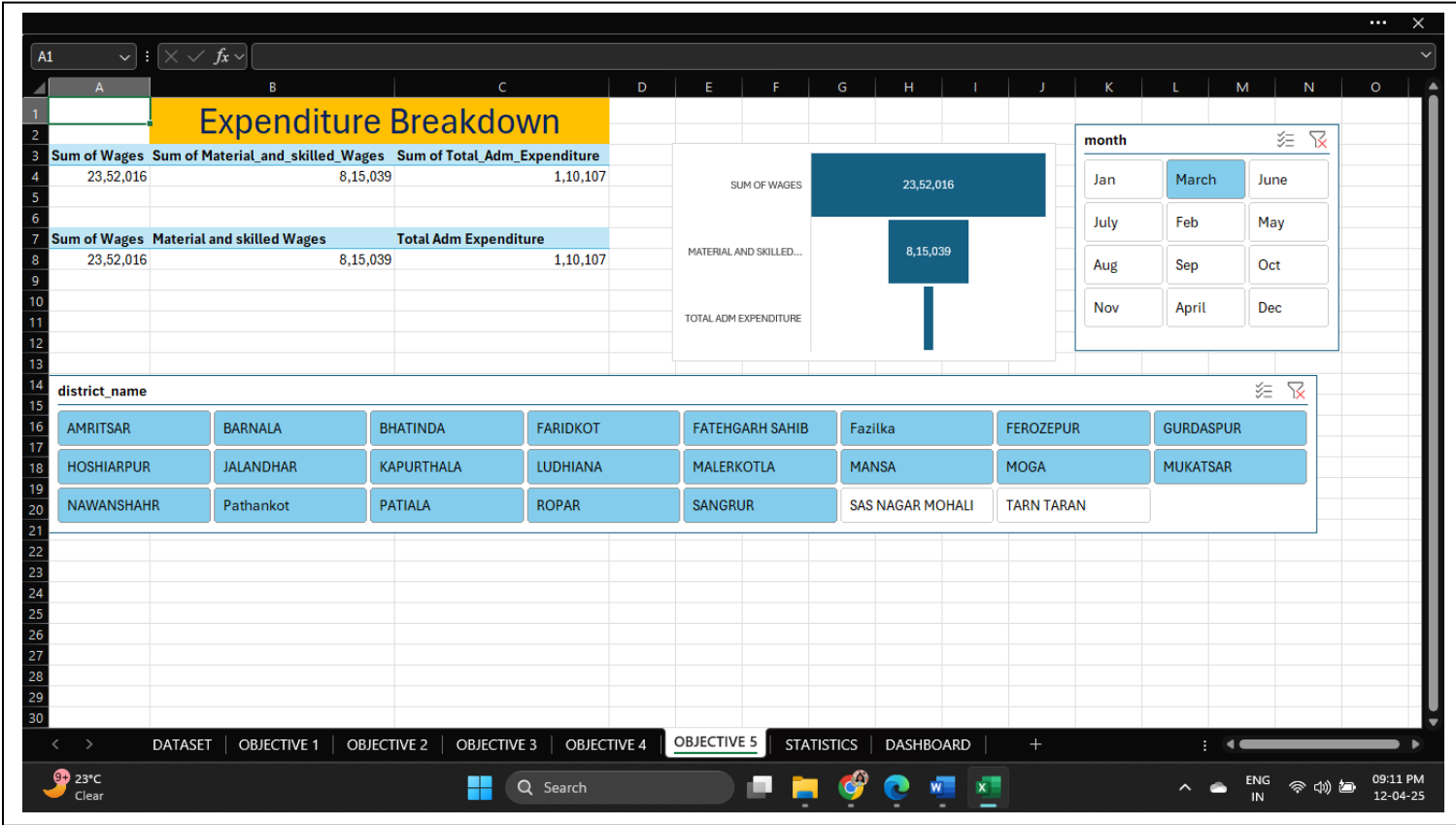
## OBJECTIVE 3: Average Days of Employment



## OBJECTIVE 4: Average Wage Per Day Per Person



# OBJECTIVE 5: Expenditure breakdown



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

**District**

- AMRITSAR
- BARNALA
- BHATINDA
- FARIDKOT
- FATEHGARH SAHIB
- Fazilka
- FEROZEPUR ...
- GURDASPUR
- HOSHIARPUR
- JALANDHAR
- KAPURTHALA
- LUDHIANA
- MALERKOTLA
- MANSA
- MOGA
- MUKATSAR
- NAWANSHAHR
- Pathankot
- PATIALA
- ROPAR
- SANGRUJ
- SAS NAGAR MOH...
- TARN TARAN

<b>Punjab</b>	<b>23</b>	<b>48398K</b>	<b>20,935</b>	<b>178K</b>
State	Total Districts	Total No of Active Workers	Average days of employment provided per Household	Average Wage rate per day per person

Sum of...  
23,52,016

MATERIAL...  
TOTAL ADM...

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

<
>
DATASET
OBJECTIVE 1
OBJECTIVE 2
OBJECTIVE 3
OBJECTIVE 4
OBJECTIVE 5
STATISTICS
DASHBOARD
+

**3839K**

Total Works Taken

**1456K**

Total Works Completed

**23967K**

Total Individuals Worked

**20209K**

Total Households Worked

**1,93,752**

Total ST workers

**537364K**

Total SC workers

# 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.

# REFERENCES:


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


SOURCE OF DATA: [DATA.GOV.IN](https://data.gov.in)


GITHUB: [MGNREGA REPOSITORY](#)

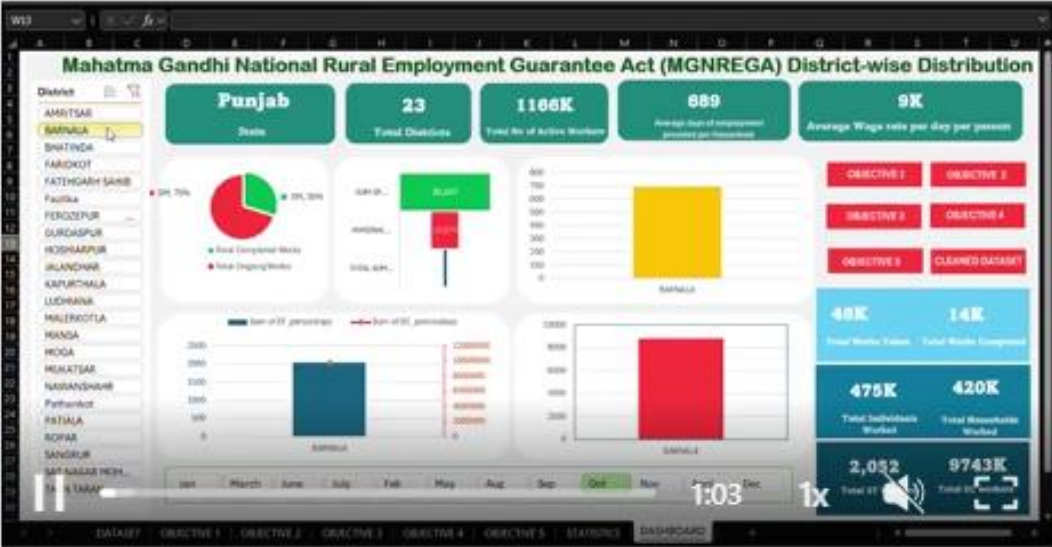
LINKEDIN: [LINKEDIN POST](#)

LIKES, COMMENTS AND IMPRESSIONS TILL DATE:



**Riya Kumari** • You  
Student at Lovely Professional University  
1h • 

 **MGNREGA Dashboard – Punjab 2024–25 Analysis**  
Just wrapped up this interactive Excel dashboard to analyze district-wise insights under the MGNREGA scheme! ...more





State	Total Districts	Total No. of Active Workers	Average Days of Employment per Household	Average Wage rate per day per person
Punjab	23	1166K	889	9K


Objective	Value
Objective 1	48K
Objective 2	14K
Objective 3	475K
Objective 4	420K
Objective 5	2,052
Cleaned Dataset	9743K


You and 11 others


7 comments

 Like

 Comment

 Repost

 Send

 94 impressions

[View analytics](#)