UIDAI DATA HACKATHON 2026

Project Title

Aadhaar Enrolment Analysis: National Overview

UIDAI_13266

Prepared By: HruthikSH

Submission Type: Government Data Hackathon Project

Dataset: Aadhaar Enrolment Dataset (Government of India)

INDEX

Introduction

Aadhaar is a foundational identity system of India, enabling efficient delivery of government services and welfare schemes. Understanding Aadhaar enrolment trends across age groups, states, and districts is critical for assessing coverage, inclusion, and demographic reach. This project presents a comprehensive analysis of Aadhaar enrolment data using Power BI, transforming raw government data into meaningful insights through interactive dashboards and visual analytics.

PROBLEM STATEMENT & APPROACH

Problem Statement

Despite large-scale Aadhaar enrolments, disparities may exist across regions, age groups, and districts. There is a need to analyze enrolment data to identify patterns, gaps, and trends that can assist policymakers in improving enrolment coverage and planning targeted interventions.

Approach

A data-driven analytical approach was adopted using Power BI. Multiple datasets were cleaned, merged, and transformed to create interactive dashboards that allow state-wise, district-wise, and age-wise exploration of Aadhaar enrolment data.

DATASETS USED

Dataset Overview

The dataset consists of Aadhaar enrolment records provided for academic and analytical purposes. The data captures enrolment counts across different age categories, states, districts, and dates.

The data was originally available in multiple CSV files and later consolidated into a single dataset for analysis

COLUMNS USED IN THE ANALYSIS

Columns Used in the Analysis

Date

State

District

Pincode

Enrolment Count (Age 0–5)

Enrolment Count (Age 5–17)

Enrolment Count (Age 18 and Above)

These columns enable demographic and regional analysis of Aadhaar enrolment coverage

REASON FOR DATASET SELECTION

Reason for Dataset Selection

Official government-related Aadhaar enrolment data

High relevance for public policy and inclusion analysis

Availability of age-wise and region-wise breakdown

Suitable for dashboard-based visualization and decision support

METHODOLOGY

Methodology

The project followed a structured analytical methodology consisting of data collection, preprocessing, transformation, analysis, and visualization using Power BI to ensure accuracy and clarity.

Data Cleaning

Extracted data from ZIP files

Removed inconsistencies in column names

Handled missing and invalid values

Corrected data type issues

Ensured uniform formatting across datasets

Data Pre-processing

Appended multiple datasets into a single fact table

Standardized state and district naming

Ensured numeric consistency across enrolment columns

Verified data integrity after merging

Key Performance Indicators

Total Aadhaar Enrolments

Enrolments by Age Group

- Age 0–5
- Age 5–17
- Age 18+

State-wise and District-wise Enrolment Totals

These KPIs provide a high-level overview of enrolment performance.

Dashboard – National Overview

The first dashboard page presents:

Total enrolments at the national level

Age-wise enrolment distribution

State-wise enrolment comparison

Geographic visualization using maps

Enrolment trends over time

This page offers a quick summary for decision-makers

Dashboard – District & Age Group Analysis

The second dashboard page focuses on:

District-level enrolment comparison

Age-wise proportion analysis

State vs age group comparison

Drill-down tables for detailed analysis

Interactive slicers for filtering

This enables granular, region-specific insights

Aadhaar Enrolment Overview Dashboard

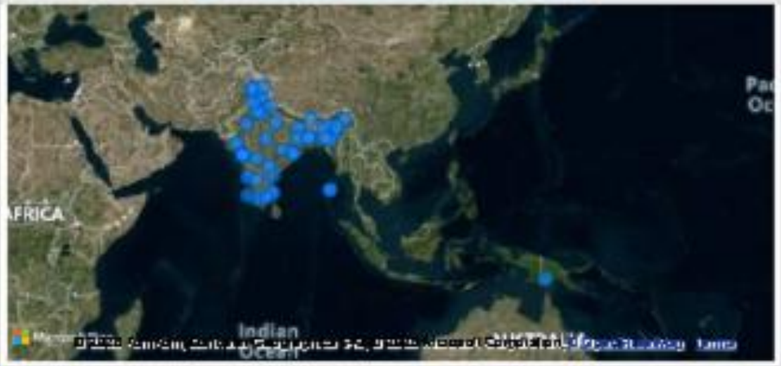
Age 0 - 5	Total Enrolment	Age 5 - 17	Age 18 Greater
4M	5M	2M	168K

state

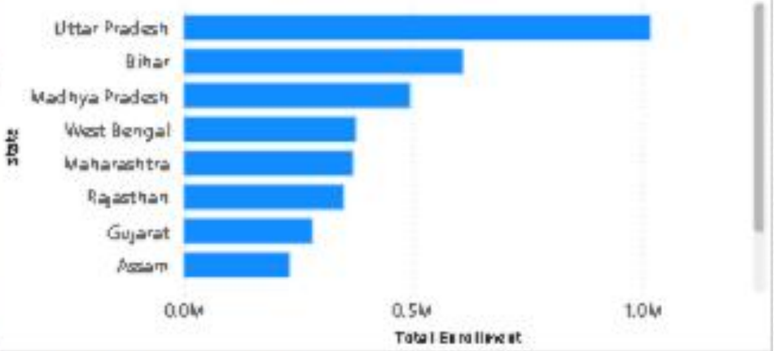
state

- [ ] 100000
- [ ] Andaman & Nicobar Islands
- [ ] Andaman And Nicobar Islands
- [ ] Andhra Pradesh
- [ ] Arunachal Pradesh
- [ ] Assam
- [ ] Bihar

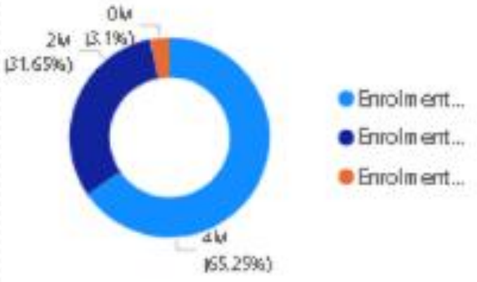
State-wise Enrolments



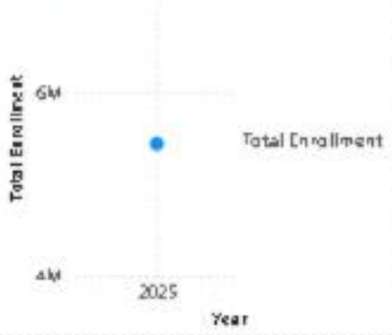
Top 10 States



Age Distribution



Aadhaar Enrolments Trend Over Time



District-Level Drilldown

state	Sum of age_0_5	Sum of age_5_17	Sum of age_18_greater
Westbengal	4	3	0
West Bengal	275400	91398	8510
West Bangal	7	3	0
West Bengal	9	6	0
Uttarakhand	31880	5479	389
Uttar Pradesh	521045	479682	17902
Tripura	7376	3654	255
The Dadra And Nagar Haveli And Daman And Diu	548	141	27
Telangana	109918	24505	1151
Tamil Nadu	182313	37227	1249
Total	3546965	1720384	168353

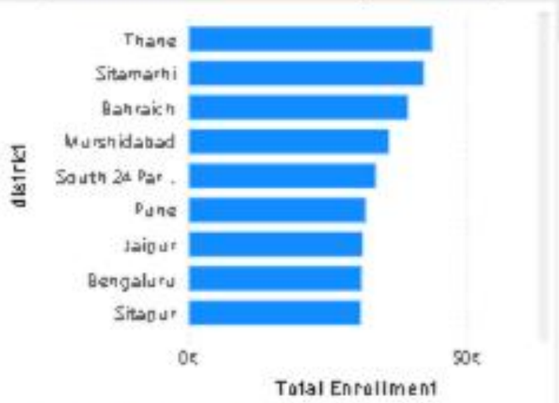
Aadhaar Enrolment – District & Age Group Analysis

State

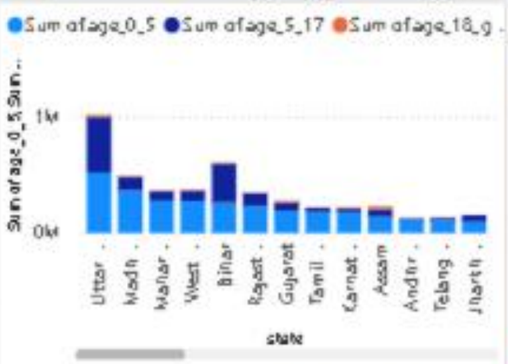
state

- 100000
- Andaman & Nico...
- Andaman And Nic...
- Andhra Pradesh
- Arunachal Pradesh
- Assam
- Bihar
- Chandigarh

Total Enrollment by district

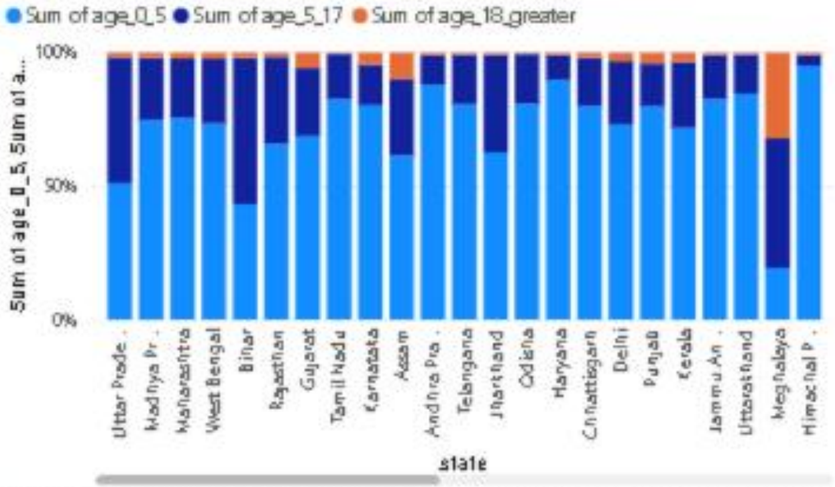


State-wise Aadhaar Enrolment by Age Group



District-wise Enrolment Map

Age-wise Enrollment Proportion



District-level Enrolment Details

state	district	Sum of age_0_5	Sum of age_5_17	Sum of age_18_greater	Total Enrollment
Maharashtra	Thane	29092	13629	967	43688
West Bengal	South 24 Parganas	25041	8197	304	33542
Uttar Pradesh	Sitapur	16237	13869	748	30854
Bihar	Sitamarhi	20679	18855	2697	42232
Maharashtra	Pune	24088	6535	1139	31763
West Bengal	Murshidabad	31442	4383	86	35911
Rajasthan	Jaipur	21436	8976	734	31146
Andhra Pradesh	Hyderabad	3831	1008	1	4840
Telangana	Hyderabad	19721	5600	669	25990
Karnataka	Bengaluru	20441	6732	3807	30980
Uttar Pradesh	Bahraich	14674	22360	2304	39338
Total		226682	110145	13456	350284

Key Insights

Aadhaar enrolment varies significantly across regions

Child enrolment (0–5 and 5–17) forms a major share

Certain districts show lower enrolment coverage

Interactive dashboards support targeted analysi

Conclusion

The project demonstrates how Aadhaar enrolment data can be effectively analyzed using Power BI. The dashboards provide meaningful insights into demographic and regional enrolment patterns, supporting informed governance.

Future Scope

Inclusion of additional years of data

Gender-based enrolment analysis

Predictive analytics for enrolment trends

REFERENCES

1. Government of India – Unique Identification Authority of India (UIDAI). Aadhaar Enrolment Statistics and Open Data Resources.

2. Microsoft Power BI Documentation. DAX Reference and Data Modeling Guidelines.

3. Ministry of Electronics and Information Technology (MeitY), Government of India. Digital India Initiative Reports.

4. Kimball, R., & Ross, M. (2013). The Data Warehouse Toolkit: The Definitive Guide to Dimensional Modeling