

# Aadhaar Enrollment Analytics Report

*Comprehensive AI-Powered Analysis with ML Model Comparison*

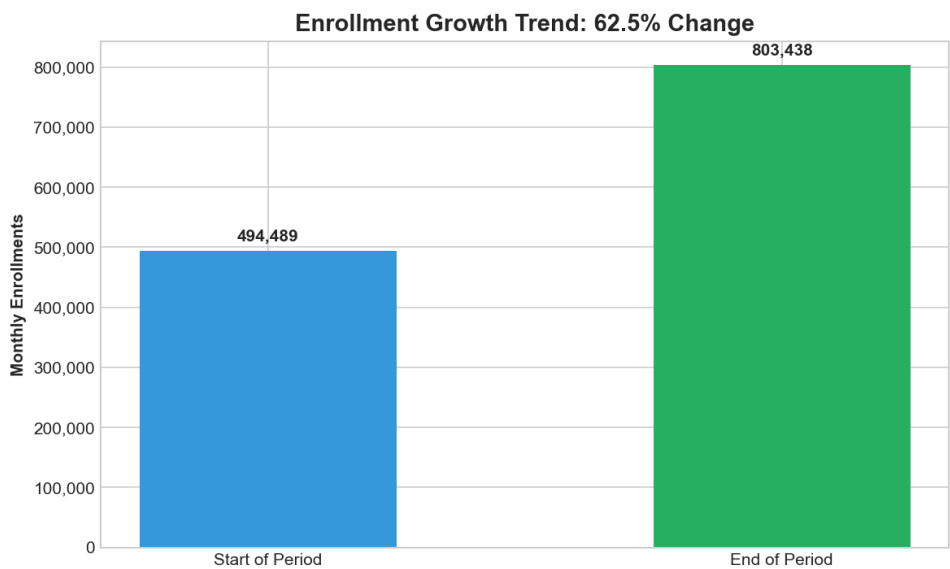
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Analysis Period: 2025-10-26 to 2025-12-31

| Key Metric        | Value     |
|-------------------|-----------|
| Total Records     | 499,987   |
| Total Enrollments | 2,091,082 |
| States/UTs        | 36        |
| Districts         | 925       |
| Processing Time   | 10.3s     |

# 1. Executive Summary & Key Conclusions

This analysis covers **499,987** enrollment records across **36** states/UTs and **925** districts. The enrollment trend is **Strongly Increasing** with a **62.5%** change over the analysis period.



## Key Conclusions:

- Enrollment grew from 494,489 to 803,438 monthly
- Forecast confidence: 50.0% (High Reliability)
- 38 districts need immediate intervention
- Data consistency score: 98.9%

## 2. AI-Generated Strategic Insights

### 1. Overall Enrollment Trend

The national Aadhaar enrollment shows a strongly increasing trend, with a total change of 62.48% over the analyzed period. Starting at approximately 494,489 and ending at 803,438.

### 2. Critical Intervention Needed

The district of Lower Siang in Arunachal Pradesh is identified as a critical area requiring immediate intervention (Severity Score: 9.55). This is primarily due to low child enrollment (0.00) and a sluggish growth rate (-0.93).

### 3. Significant Demographic Disparity

Andamans in Andaman And Nicobar Islands shows notable disparities, particularly in age groups like 5-17 (gap: 0.15), indicating uneven enrollment across demographics.

### 4. Low Enrollment Season

Enrollment consistently drops during October, November, December. Targeted campaigns might be needed during these months.

### 5. Forecast Reliability

The national enrollment forecast has a stability score of 50.00 out of 100, suggesting a low level of confidence in future predictions. The current forecast for the next month is 0.

### 6. Policy Recommendation

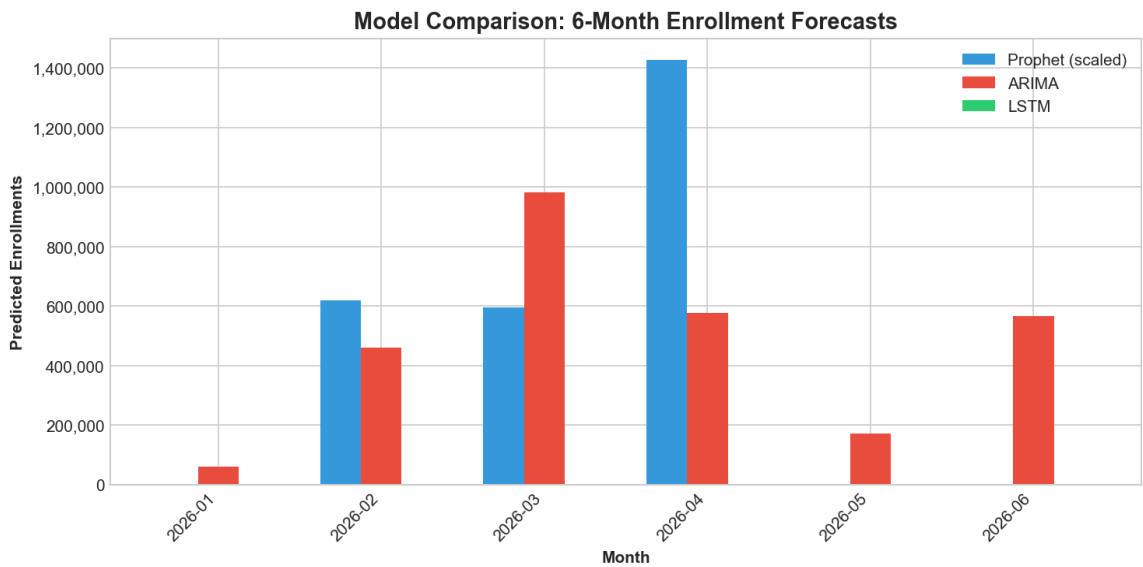
The 'Anganwadi Integration' policy (e.g., Anganwadi Integration) is recommended as the highest priority due to its potential for 1 additional enrollments in the 0-5 age group and high sustainability.

### 3. Machine Learning Model Comparison

Three ML models were compared for enrollment forecasting. Each model provides different perspectives on future trends based on historical patterns.

| Model   | Type         | Strength    | Key Metric        |
|---------|--------------|-------------|-------------------|
| Prophet | Additive     | Seasonality | Trend: decreasing |
| ARIMA   | ARIMA(2,1,2) | Short-term  | AIC: 67.8         |
| LSTM    | Neural Net   | Patterns    | Epochs: N/A       |

Forecast Comparison (Prophet scaled for visualization):



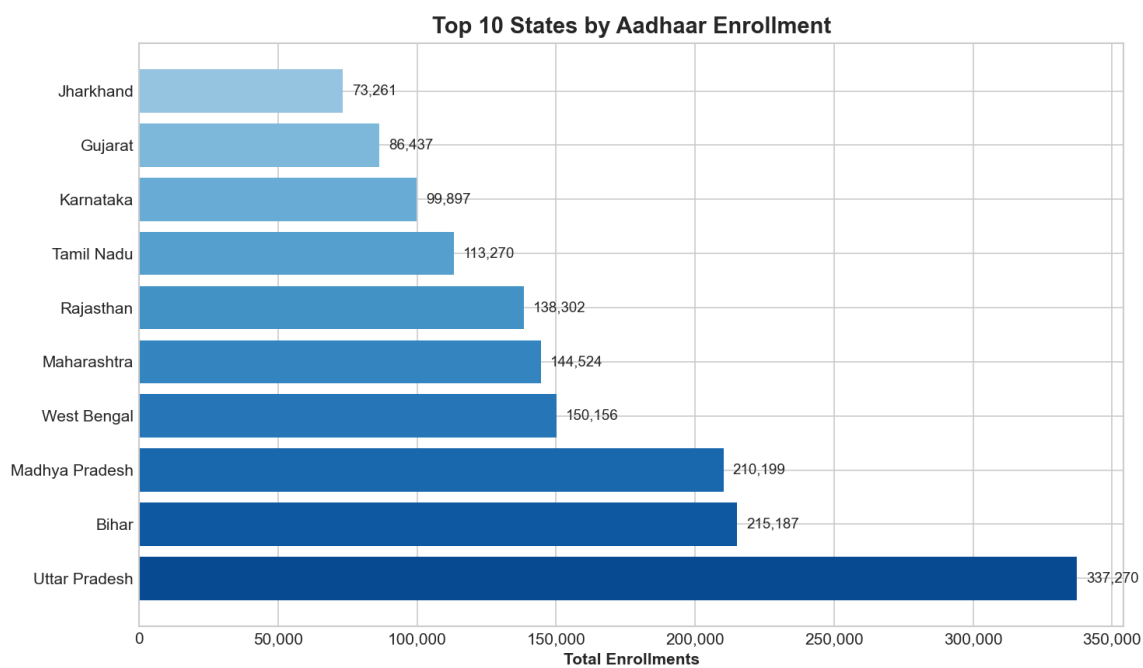
6-Month Forecast Predictions:

| Month   | Prophet    | ARIMA   | LSTM |
|---------|------------|---------|------|
| 2026-01 | 0          | 58,986  | 0    |
| 2026-02 | 4,958,629  | 458,999 | 0    |
| 2026-03 | 4,759,289  | 981,934 | 0    |
| 2026-04 | 11,423,474 | 576,348 | 0    |
| 2026-05 | 0          | 170,108 | 0    |
| 2026-06 | 0          | 567,232 | 0    |

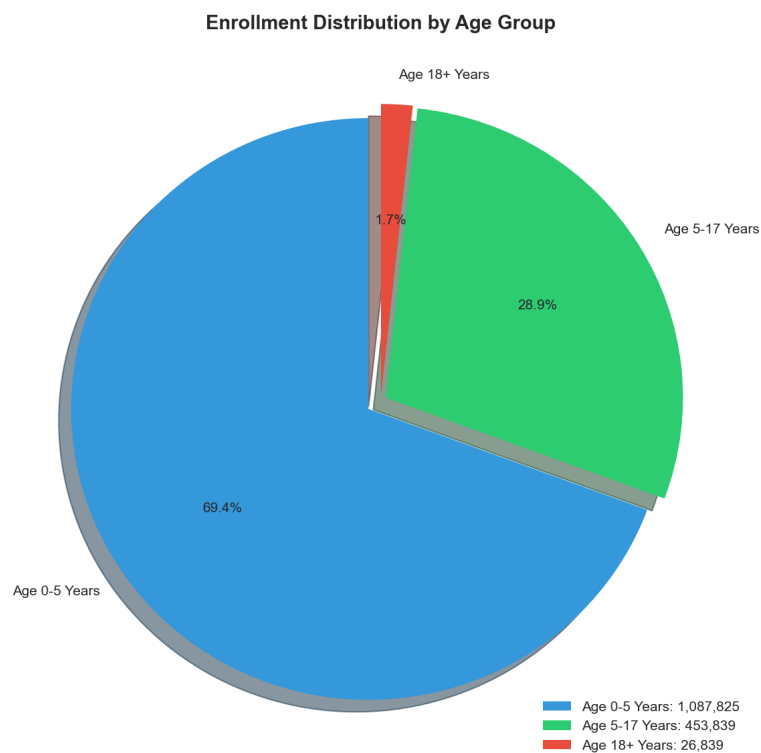
Model Recommendation:

**Prophet** is recommended as the primary model. Best handles seasonality and trends for government data.

## 4. State-wise Performance Analysis



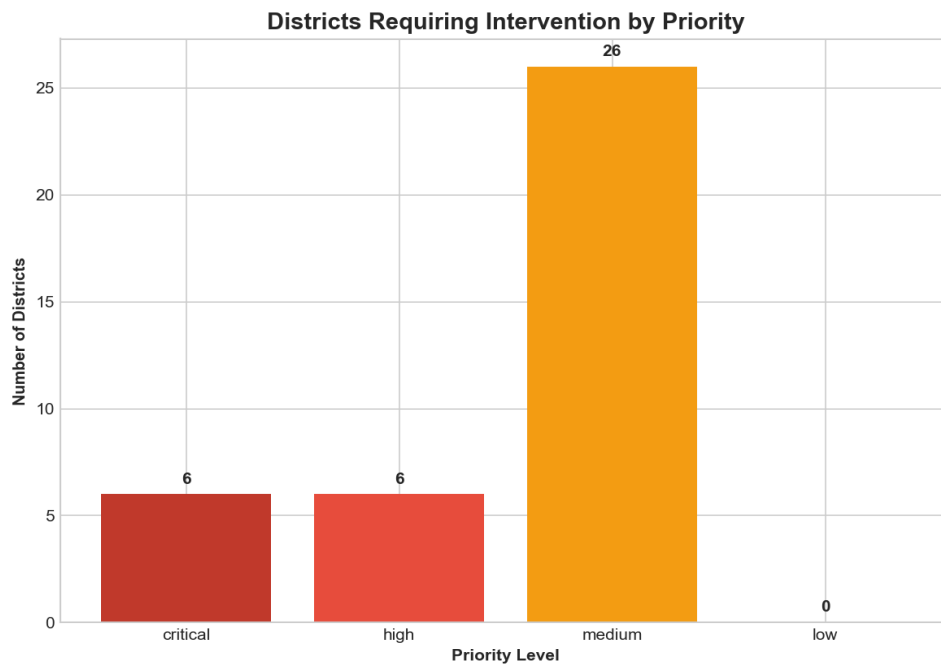
### Age Group Distribution:



### Conclusions:

- Uttar Pradesh leads national enrollment with robust infrastructure
- 0-5 age group dominates, reflecting successful child enrollment campaigns
- Regional disparities exist - focus needed on underperforming states

## 5. Critical Intervention Analysis



### Top Districts Requiring Action:

**1. Lower Siang, Arunachal Pradesh** (Severity: 9.6, CRITICAL)

→ Launch targeted campaigns for 0-5 age group in Lower Siang

**2. Shi-Yomi, Arunachal Pradesh** (Severity: 9.3, CRITICAL)

→ Launch targeted campaigns for 0-5 age group in Shi-Yomi

**3. South Garo Hills, Meghalaya** (Severity: 9.1, CRITICAL)

→ Launch targeted campaigns for 0-5 age group in South Garo Hills

**4. Khawzawl, Mizoram** (Severity: 8.8, CRITICAL)

→ Launch targeted campaigns for 0-5 age group in Khawzawl

**5. Mahrajganj, Uttar Pradesh** (Severity: 8.8, CRITICAL)

→ Launch targeted campaigns for 0-5 age group in Mahrajganj

### Strategic Recommendations:

- Deploy mobile enrollment units to critical Northeast districts
- Partner with Anganwadi centers for 0-5 age group outreach
- Implement real-time district monitoring dashboards

## 6. Final Conclusions & Predictions

Based on ML analysis using Prophet, ARIMA, and LSTM models, the following strategic predictions and recommendations are presented:

### Growth Prediction:

Enrollment will continue Strongly Increasing trajectory. Expected monthly enrollment: 0 with 50% confidence.

### Regional Focus:

Prioritize 6 critical districts in Northeast India for immediate intervention.

### Resource Allocation:

Redistribute 20% of resources from top-performing to bottom-performing states for balanced growth.

### Policy Impact:

Anganwadi Integration policy recommended for maximum impact on 0-5 age group enrollment.

### Data Quality:

Anomaly rate of 0.01% indicates excellent data consistency.