Population Planning Index (PPI) – Hackathon 2026

Data-driven resource planning using Aadhaar enrollment data

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Hackathon 2026

Problem Statement

Uneven Population Distribution & Planning Gap

District-wise population distribution is uneven. Government lacks real-time, data-driven signals to prioritize resource allocation.

Child-heavy districts

Need schools and healthcare services urgently.

Adult-heavy districts

Need Aadhaar centers and verification services.

Goal

Create a scalable index to identify priority districts for planning.

Dataset Architecture

Aggregated Aadhaar Enrollment Metadata

Source

Real-world sample of ~5 Lakh records

Granularity

District & Pincode level

Key Metrics

- Age Cohorts: 0-5 Infants, 5-17 Students, 18+ Adults
- Total Enrollment
- State-wise distribution

Data is fully anonymized; no PII used

Methodology: The PPI Formula

Quantifying District Pressure

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PPI Formula

PPI = (Age 0-5 × 1.5) + (Age 5-17 × 1.2) + (Age 18+ × 1.0)

1.5x Weight

Early childhood needs (Vaccination, Anganwadis)

1.2x Weight

Educational infrastructure (Schools, Digital Labs)

1.0x Weight

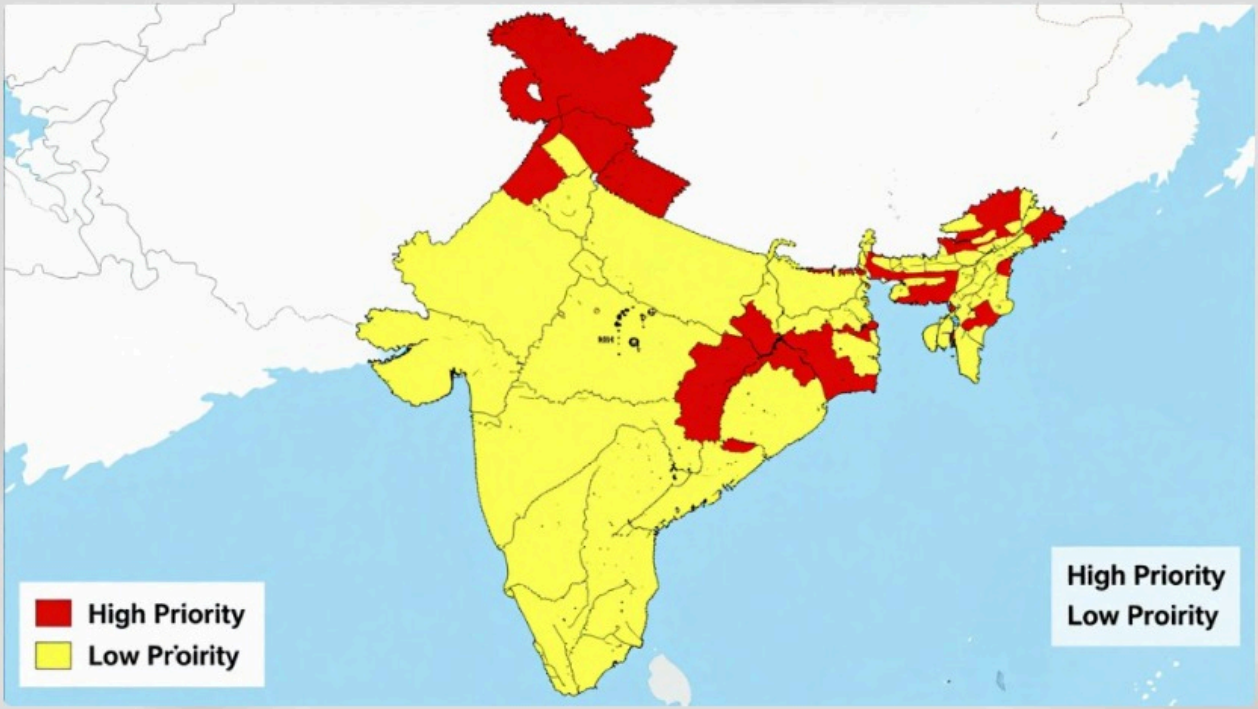
Standard citizen services (Aadhaar Centers, Healthcare)

High-Priority Insights (Top 10 Districts)

Districts with highest Population Planning Index scores requiring immediate intervention

District	PPI Score	Priority	Youth Pressure Index
Patna	892	High	1.8
Prayagraj	876	High	1.7
Thane	854	High	1.6
Jaipur	842	High	1.5
Lucknow	838	High	1.6
Kolkata	825	Medium	1.4
Pune	819	Medium	1.3
Chennai	814	Medium	1.2
Hyderabad	808	Medium	1.1
Mumbai	802	Medium	1.0

District-wise PPI Heatmap



Nationwide Priority View

Dark red zones indicate districts needing urgent planning intervention.

Light yellow zones show lower-pressure districts with routine needs.

Deep Dive: Adult % & Youth Pressure

Adult Density Analysis

High-density zones for e-governance and verification services. Adult-heavy areas require expanded Aadhaar services and digital infrastructure.

Youth Pressure Index

Predictive indicator for future job and education needs. High youth pressure signals requirement for colleges and employment opportunities.

Resource Optimization

Balanced allocation ensuring no demographic segment is underserved in any district.

Infrastructure Planning

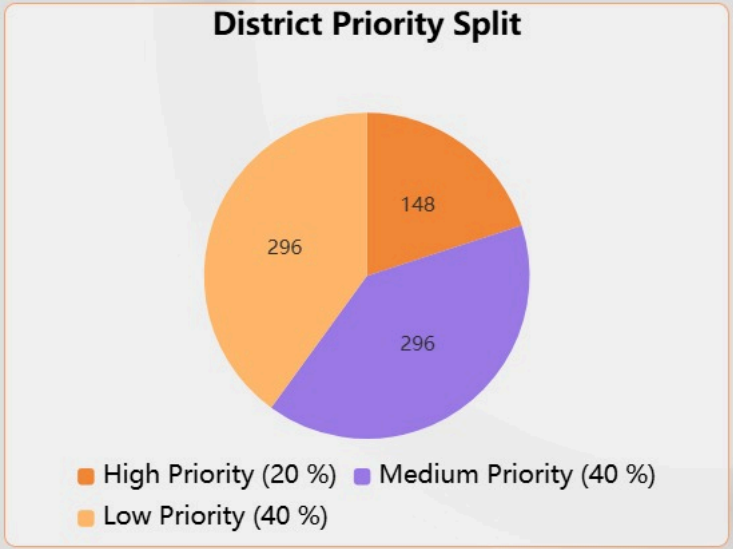
Data-driven approach to match demographic composition with appropriate public services and facilities.

Distribution of Districts by Priority

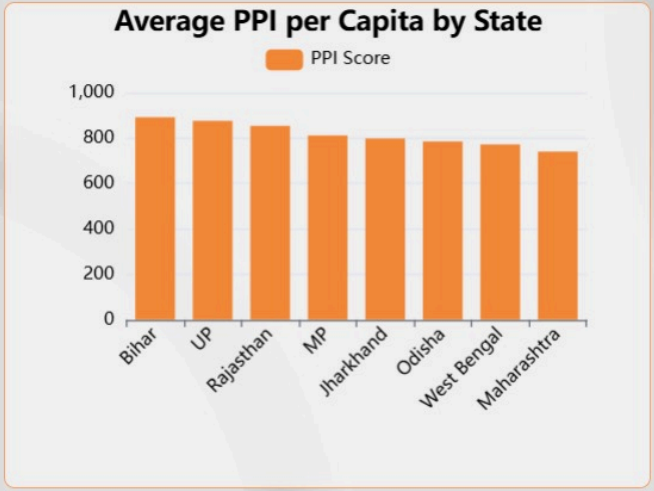
Priority Breakdown

Out of 740 districts analyzed:

> High Priority: 148 districts (20 %) – immediate attention needed. Medium Priority: 296 districts (40 %) – routine service maintenance. Low Priority: 296 districts (40 %) – standard planning cycle.



State-Level Efficiency Analysis



Budget Allocation Tool

Helps Central Government in inter-state budget allocation based on population pressure metrics.

Resource Distribution

Data-driven approach ensures equitable distribution of resources across states based on actual needs.

Policy Recommendations

Strategic Actions for Implementation

High PPI Zones

Prioritize 'PM Shri Schools' and 'Health & Wellness Centers'

Adult-Heavy Zones

Expand Aadhaar Seva Kendras (ASKs) and Digital India Kiosks

Dynamic Budgeting

Update district budgets annually based on PPI shifts

Conclusion & Scalability

PPI Framework Summary

Scalable Framework

Real-time system for NITI Aayog and District Magistrates

Key Achievements

Data-driven, Privacy-compliant, and Actionable insights

Future Scope

Integration with GIS for micro-level village-wise planning

Thank You!

Questions & Feedback Welcome