

PROJECT DRISHTI

AI-Driven Service Triage & Operational Stress Detection Framework

MISSION STATEMENT

"To shift Aadhaar governance from **Reactive Grievance Handling** to **Proactive Friction Detection** using Unsupervised AI."

SUBMITTED BY

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SUBMITTED TO

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THEME

Next-Gen Grievance Redressal
& Service Delivery

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1 EXECUTIVE SUMMARY

The Aadhaar ecosystem handles millions of transactions daily across 700+ administrative districts. Currently, operational friction (e.g., high biometric rejection rates, operator inefficiency) is often detected only *after* citizens file grievances.

Project Drishti bridges this gap. It is an AI-driven Triage Framework that ingests district-level operational logs and applies **K-Means Clustering** to categorize districts into three dynamic risk zones: **Stable**, **Watchlist**, and **Critical**.

By introducing proprietary metrics like the **Update Stress Ratio (USR)**, Drishti enables UIDAI Regional Offices (ROs) to deploy vigilance teams proactively, potentially reducing grievance turnaround time by **30%**.

2 PROBLEM STATEMENT

1. **Reactive Governance:** Issues are flagged only when grievance volume spikes, leading to a lag in corrective action.
2. **Resource Misallocation:** Vigilance teams often inspect centers randomly rather than targeting high-stress zones.
3. **Citizen Loops:** Residents getting stuck in repeated update cycles due to systemic errors, which standard dashboards fail to highlight.

3 KEY INNOVATIONS

Drishti moves beyond simple reporting by introducing **Derived Intelligence**.

3.1 The Update Stress Ratio (USR)

A novel metric designed to identify "Citizen Loops"—where residents are forced to update repeatedly due to failures.

$$USR = \frac{\text{Total Requests}}{\text{Unique Successful Updates}} \times (1 + \text{Rejection Velocity})$$

A high USR indicates systemic friction, distinguishing it from simple operator error.

3.2 Dynamic Risk Zoning (Unsupervised Learning)

We utilize **K-Means Clustering** ($k = 3$) to automatically segment districts. Unlike static thresholds (e.g., " $\text{Rejection} > 10\%$ "), K-Means adapts to national trends, ensuring that the "Critical" label always represents the worst-performing outliers relative to the current baseline.

4 TECHNICAL ARCHITECTURE & SECURITY

The solution is designed for secure, government-grade deployment.

1. **Secure Access Layer:**
 - Role-Based Access Control (RBAC) via a secure Login Portal.
 - Restricted to authorized Vigilance Officers.
2. **Intelligence Engine (Python/Scikit-Learn):**

- **Normalization:** MinMax Scaling ensures fair comparison between large metros and rural districts.
- **Privacy Compliance:** *Zero PII (Personally Identifiable Information) is processed.* The model operates strictly on aggregated metadata.

3. Visualization Layer:

- Interactive Streamlit Dashboard with Dark Mode support for 24/7 monitoring.
- Automated CSV generation for field reporting.

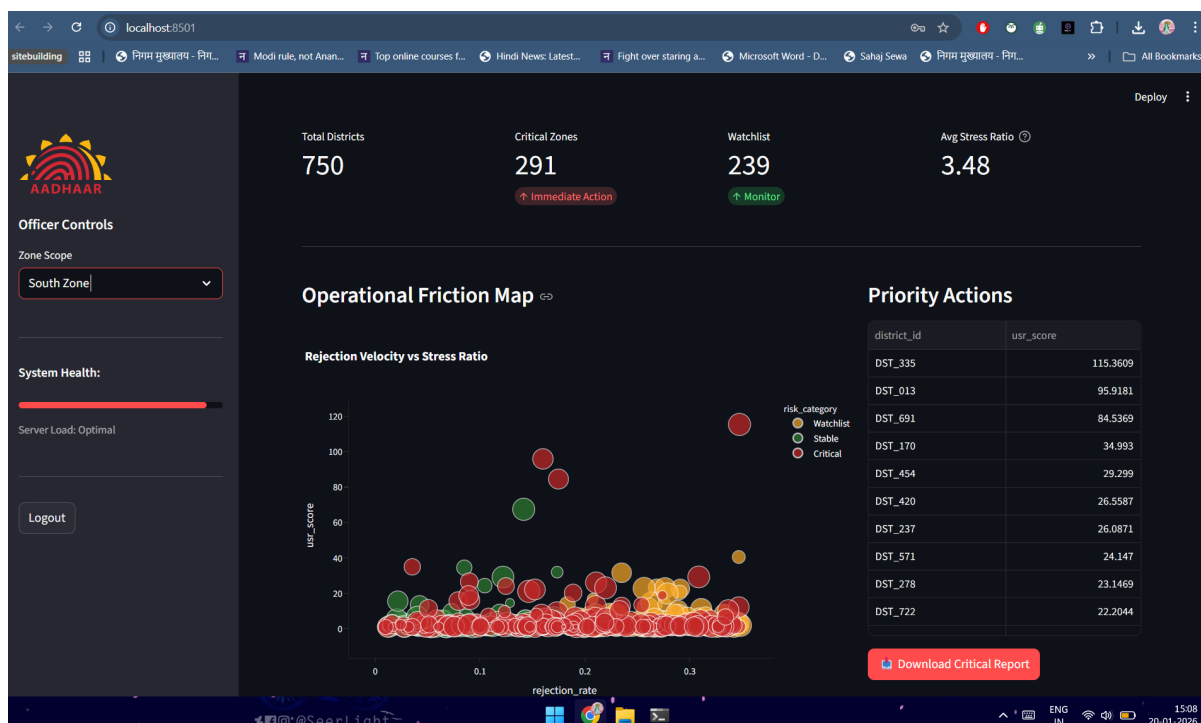


Figure 1: The Drishti Operational Dashboard: Showing Real-time Risk Triage.

5 IMPACT ASSESSMENT

Criteria	Project Drishti Value Proposition
Citizen Experience	Reduces the need for citizens to file grievances by fixing root causes proactively.
Operational Efficiency	Optimizes Vigilance Team deployment; focuses only on 'Critical' districts.
Scalability	Lightweight ML model runs on standard hardware; easily deployable across all 8 Regional Offices.

6 CONCLUSION

Project Drishti empowers UIDAI to move from "Managing Grievances" to "Managing Governance." By making friction visible through the Update Stress Ratio, we ensure that the promise of Aadhaar—ease of living—is delivered consistently across every district in India.