Real-Time AI Governance System

For Andhra Pradesh State Civil Supplies Corporation Limited
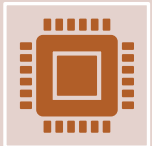
Team: KL University

Problem Statement

- Manual monitoring is slow, costly, and error-prone.

- Existing AI solutions are not optimized for Indian government needs.

- Andhra Pradesh requires real-time, scalable, and accurate AI tools for governance and security.
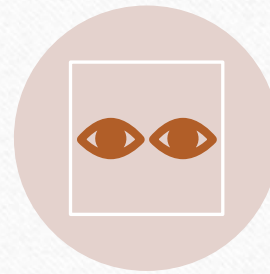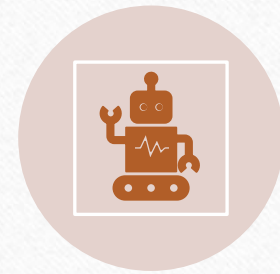
Solution Overview: 4-Tool AI Ecosystem

1. GUNNY BAG COUNTER: REAL-TIME INVENTORY TRACKING VIA CCTV.

2. LICENSE PLATE DETECTION: AI-OPTIMIZED FOR INDIAN VEHICLES.

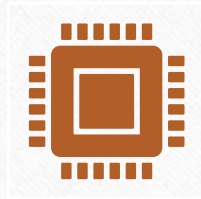3. CONTEXTUAL INTELLIGENCE: SCENE ANALYSIS WITH EMERGENCY ALERTS.

4. FACIAL RECOGNITION: ROLE-BASED IDENTIFICATION AND LOCATION TRACKING.

Gunny Bag Counter

- Custom YOLO v8 model, 92.8% accuracy.

- Real-time object detection and line crossing logic.

- 40% reduction in counting errors, 10x faster than manual.

- 50% cost reduction in inventory management.
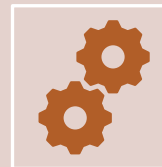
License Plate Detection

- Proprietary AI model, 60% better for Indian trucks.
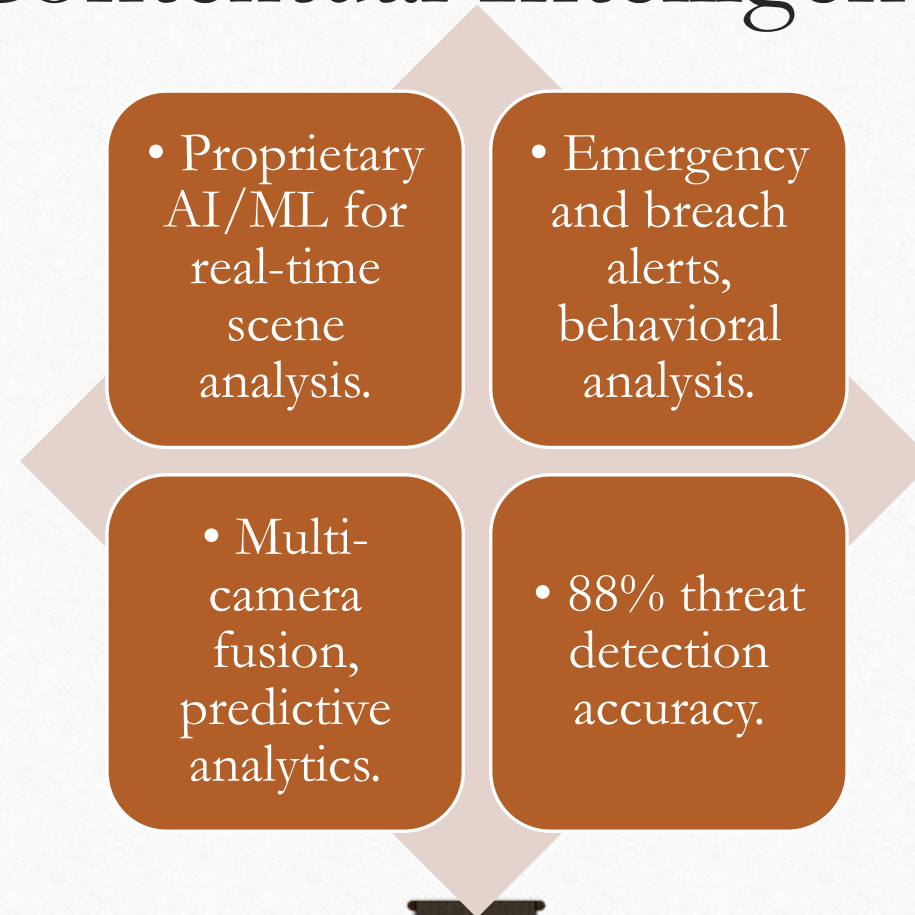
- Scans entire vehicle, then extracts plate.

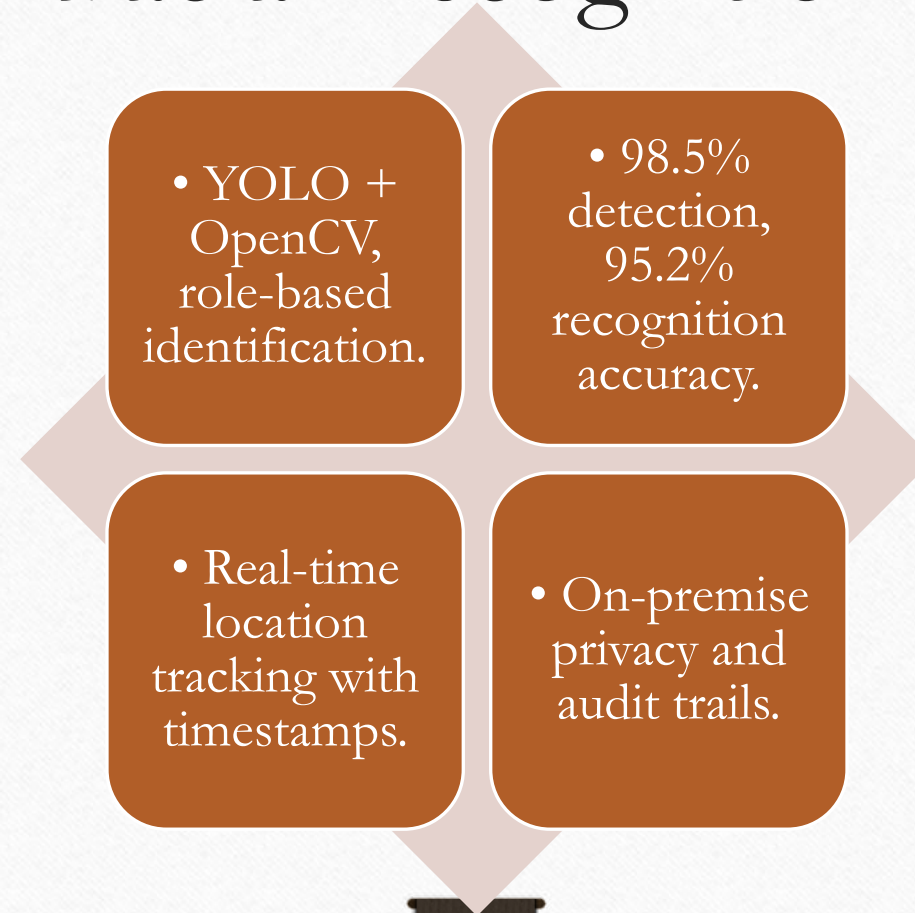- 85–90% accuracy vs 45–55% for open-source.

- <500ms processing time, optimized for Indian formats.

Contextual Intelligence

- Proprietary AI/ML for real-time scene analysis.

- Emergency and breach alerts, behavioral analysis.

- Multi-camera fusion, predictive analytics.

- 88% threat detection accuracy.

Facial Recognition

- YOLO + OpenCV, role-based identification.

- 98.5% detection, 95.2% recognition accuracy.

- Real-time location tracking with timestamps.

- On-premise privacy and audit trails.

Technical Architecture

- ALL MODELS BUILT FROM SCRATCH, OPTIMIZED FOR INDIAN CONTEXT.

- UNIFIED REAL-TIME PIPELINE: CCTV ? AI MODELS ? ALERTS/UI ? GOVERNMENT SYSTEMS.

- MODULAR, SCALABLE, AND SECURE ARCHITECTURE.

System Performance Comparison

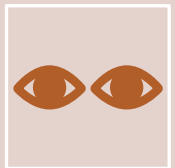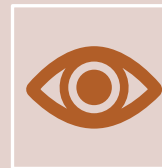| Metric	Traditional	Our Solution	Improvement
Accuracy	60–70%	85–95%	+35%
Speed	Manual/Delayed	Real-time	10x faster
Cost (Annual)	15,00,000	4,16,000	72% savings
Uptime	Limited	24/7	Continuous

Individual Tool Performance

- Gunny Bag Counter: 92.8% accuracy (vs 60% manual)

- License Plate Detection: 85–90% accuracy (vs 45–55% existing)

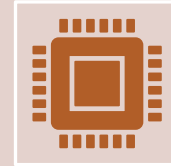- Facial Recognition: 95.2% accuracy (vs 85% standard)

- Contextual Intelligence: 88% threat detection accuracy
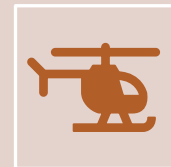
Innovation & Market Advantage

- Custom models, Indian context optimization.

- Unified real-time ecosystem.

- 72% cost reduction, 24/7 uptime.
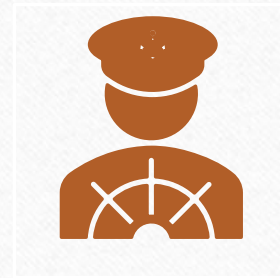
- Ready for state-wide deployment.

Strategic Alignment with AP Government

- Supports AP's digital transformation and AI university partnership.
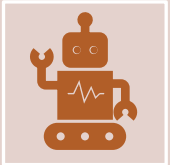
- Targets 20 departments for AI adoption.

- Innovation leadership for Andhra Pradesh and India.

Market Opportunity

- Indian AI Market: $7.8B by 2025.

- Government AI spending: 15% CAGR.

- Smart City investment: 2 lakh crore.

- AP focus: Digital governance transformation.
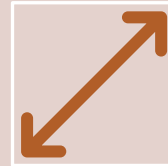
Deployment Roadmap

- Phase 1: Pilot in 2–3 facilities (Months 1–3).

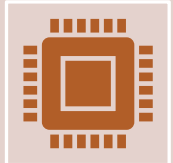- Phase 2: Integrate 5 key departments (Months 4–6).

- Phase 3: State-wide rollout (Months 7–12).

- Phase 4: Expand to other states (Year 2).
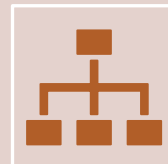
Expected Benefits

- 80% reduction in manual monitoring costs.

- Real-time threat detection and alerts.

- 10+ lakh annual savings per department.

- Establishes India as AI governance leader.

Team & Credentials

- KL UNIVERSITY, SIH 2024 FINALIST.

- CERTIFIED IN GOOGLE ANALYTICS, CISCO NETWORKING.

- HAWKVANCE AI PROJECT SUCCESS.

- SUPPORTED BY AP GOVERNMENT DIGITAL INITIATIVES.

Next Steps & Call to Action

 1. Pilot deployment approval.

 2. Stakeholder engagement.

 3. System integrator partnerships.

 4. Project funding and resource allocation.

Vision Statement

- "To transform governance through intelligent automation, making public administration more efficient, transparent, and responsive to citizen needs while establishing India as a global leader in AI-driven governance solutions."