BILLBOARD AUTHOURIZATION DETECTION

TECHNOVA SEASON 2
TEAM KRYPTONITE

MANOJ V
JASHWANTH J
VIBIN CHANDAR AM

Smart Billboard Violation Detection & Reporting System

Vision:

Transform cities into safer, cleaner, and smarter spaces.
Provide a transparent and reliable system for monitoring billboard compliance.

Tagline:

"Detect → Verify → Report → Enforce → Smarter Cities"

Why this project matters:

Billboards can distract drivers → road safety risks.
Unregulated billboards clutter city spaces → poor aesthetics.
Manual monitoring is slow and often inconsistent.

This project empowers citizens and authorities to maintain order, safety, and beauty

Problem Statement

Rapid Urban Growth: Increased billboards, especially in commercial zones.

Manual Inspection Limitations:

Time-consuming and labor-intensive.
Often fails to cover all city areas.
Delays in action lead to repeated violations.

Safety & Civic Concerns:

Structural hazards → falling boards can injure citizens.
Visual clutter → reduces city appeal, tourism, and local business image.
Obscene or prohibited content → affects social harmony.

Need: A system that is fast, transparent, participatory, and enforceable.

Slide 3 – Project Goals & Impact

Goals:

Detect and identify billboard violations in all urban areas.
Verify reports against local regulations and standards.
Enable real-time reporting to municipal authorities.
Encourage active citizen participation.

Impact:

For Citizens: Safer roads, enhanced civic responsibility, ability to participate in city governance.
For Municipal Authorities: Faster enforcement, reduced manpower costs, traceable reports for legal actions.
For Cities: Improved aesthetics, stronger law compliance, better public trust.

Violation Criteria

Oversized Billboards: Exceed legally allowed dimensions.

Restricted Zone Placement: Near schools, hospitals, traffic junctions, or other sensitive areas.
Structural Hazards: Old, damaged, or tilted billboards that may pose a safety risk.
Content Violations: Obscene, misleading, or prohibited advertising content.
Permit Issues: Missing, fake, or expired licenses/permits.

Why criteria matter:

Ensures fair and consistent enforcement.
Protects public safety and urban aesthetics.
Allows authorities to prioritize high-risk violations.

Project Approach

Hybrid Approach: Rule-based + Citizen engagement + Municipal verification.

How it works:

Citizen Observations: Local people report potential violations.
Rule-Based Screening: Reports are checked against city regulations.
Verification by Authorities: Officers confirm violations and take action.

Benefits:

Quick detection of violations.
Reduces false or duplicate reports.
Encourages active civic participation.
Ensures transparency and accountability.

Citizen Participation & Engagement

Citizen Role:

Acts as the eyes and ears of the city.
Reports violations in their neighborhoods.

Engagement Strategies:

Recognition programs for top contributors.
Community awards or certificates for consistent participation.
Public dashboards (non-technical) showing status of reports.

Impact:

Increased awareness about civic rules.
Greater community involvement → stronger law compliance.
Fosters a sense of responsibility and pride among citizens.

Municipal Enforcement Workflow

Step 1 – Receive Report: From citizens or inspections.
Step 2 – Verify: Officers confirm if the violation meets local regulations.
Step 3 – Take Action: Issue warnings or fines , Remove or repair hazardous billboards.
Step 4 – Track Progress: Maintain transparent records of all actions.

Benefits:

Faster response to violations.
Reduces legal disputes by having traceable evidence.
Builds public trust in city administration.

Pilot Implementation & Scaling

Pilot Phase:
Start with one city zone → measure efficiency and citizen engagement.
Collect feedback from both citizens and officers.

Refinement:
Adjust rules and reporting processes based on pilot data.
Implement reward mechanisms to encourage participation.

Scaling Up:
Gradual expansion to entire city.
Standardize workflow for replication in other cities.

Advantages of Pilot Approach:
Reduces risk of errors.
Ensures smoother adoption.
Highlights real challenges before full-scale rollout.

Future Roadmap & Expansion

City-Wide Integration: Cover all urban zones systematically.

Multi-City Expansion: Adapt rules for local regulations.

Citizen Programs: Sustain engagement via awareness campaigns.

Data-Driven Insights: Analyze violations to improve urban planning.

Policy Support: Inform municipal regulations and billboard guidelines.

Community Impact: Strengthens civic responsibility and law compliance.

Conclusion & Why Unique

Unique Aspects:

Hybrid monitoring → Rules + Citizen Engagement + Municipal Oversight.
Community-driven approach → faster detection, stronger compliance.
Transparent and accountable enforcement.

Final Outcome:

Safer roads and public spaces.
Cleaner, aesthetically pleasing cities.
Citizens empowered to actively contribute.
A model for participatory and efficient urban governance.

THANK YOU