

Smart Traffic Insights: Steering India's Urban Mobility with AI

Innovating for Smarter, More Efficient Indian Cities

Navigating the Chaos: India's Urban Traffic Challenge & Our Vision

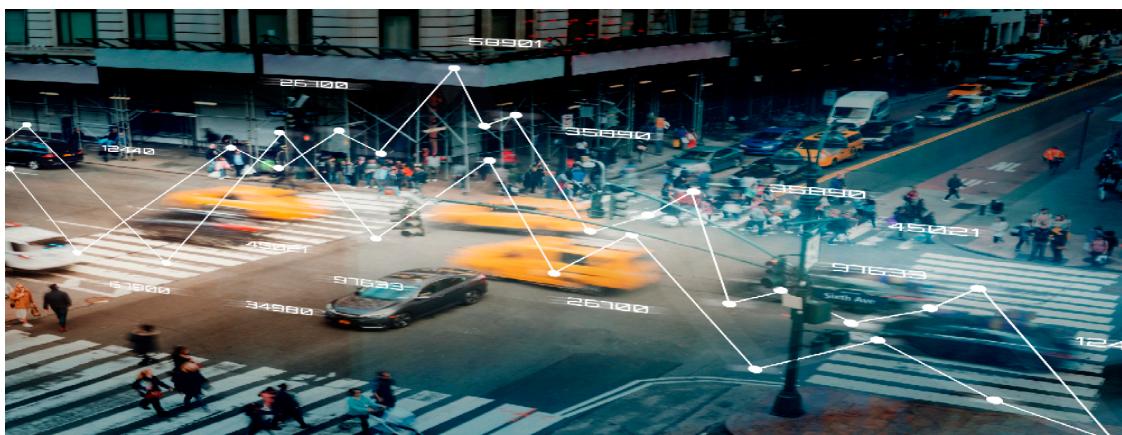
India's rapid urbanisation brings immense traffic challenges: congestion, pollution, and lost productivity. Our vision is to transform this chaotic landscape into smart, efficient urban mobility using AI. We aim to empower citizens, delivery services, and city officials with actionable insights.

- Congestion: Daily commutes are a significant time drain.
- Pollution: Increased emissions from idling vehicles.
- Efficiency Loss: Economic impact due to delayed logistics.

The AI-Powered System: How We Gather & Process Traffic Data

Our system leverages a multi-modal approach to data collection and processing. Advanced AI algorithms analyse this data to provide accurate and timely traffic insights.

- Data Acquisition
- Data Processing
- Insight Generation



This robust framework ensures comprehensive coverage and reliable insights for all stakeholders.

Real-Time Insights for Citizens: Faster Commutes & Optimal Route Planning

- Dynamic route optimisation based on live data.
- Estimated travel times with high accuracy.
- Alerts for accidents, diversions, and special events.
- Integration with popular navigation apps for seamless experience.



Empowering Delivery Services: Efficiency Through Predictive Traffic Analytics

1. Route Optimisation – Minimise travel distance and time by avoiding congested areas.
2. Fleet Management – Better allocation of resources based on traffic predictions.
3. Improved ETAs – Accurate delivery time estimates boost customer trust.
4. Fuel Savings – Reduced idling and efficient routes lead to lower operational costs.

Strategic Tools for City Officials: Congestion Prediction & Infrastructure Planning

- Identify congestion hotspots and peak hours.
- Simulate impact of new infrastructure projects.
- Optimise traffic signal timings dynamically.
- Plan for emergency response routes efficiently.

Case Study in Action: Analysing Traffic Patterns in a Generic Indian City

We analysed traffic data from a generic Indian city, focusing on a major arterial road. The insights revealed recurring congestion patterns during morning and evening rush hours.



Adapting for Indore: A Blueprint for Implementation in the Smart City

- Pilot Data Collection – Utilise existing CCTV, smart signals, and public transport GPS data.

- Stakeholder Engagement – Collaborate with IMC, traffic police, and public transport authorities.
- Customised Dashboard – Develop a dashboard tailored to Indore's specific traffic challenges.
- Phased Rollout – Begin with key corridors, then expand city-wide.

Beyond Today: Future Enhancements & Scalability Across India

- EV Charging Optimisation – Integrate with EV charging network for smarter energy use.
- Drone Traffic Management – Prepare for future aerial delivery and transport logistics.
- Pedestrian Flow Analysis – Optimise safety and movement in high-footfall areas.
- Autonomous Vehicle Integration – Future-proofing for self-driving car ecosystems.

Driving Forward: Key Takeaways & Our Collective Path to Smarter Mobility

Smart Traffic Insights is more than just technology; it's a commitment to a better urban future. Together, we can create more efficient, sustainable, and liveable Indian cities.

"The future of urban mobility in India is intelligent, interconnected, and accessible to all."

Submitted by:- Daniya Shaikh

Sneha Kushwaha

Bhavna Sharma

