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(57) Abstract :

The present invention relates to a smart city infrastructure management system that integrates Internet of Things (IoT) technology with Big Data analytics to enhance urban management and operational efficiency. The system comprises a network of IoT sensors deployed across various infrastructure components, including transportation, utilities, and environmental monitoring. These sensors collect real-time data on traffic conditions, resource consumption, air quality, and structural health. A cloud-based analytics platform processes this data using advanced analytical techniques to generate actionable insights and predictive models. A central monitoring dashboard provides city administrators with visualization tools for informed decision-making and dynamic resource allocation. The system enables proactive maintenance, optimizes traffic management, and fosters sustainability by promoting data-driven strategies for managing urban resources. By leveraging the power of IoT and Big Data, the invention addresses the p

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