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Urban Planning Tool

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Abstract: *Urban planning is a critical component of sustainable city development, yet traditional planning methods often lack efficiency, transparency, and citizen participation. With the rapid expansion of urban areas, it is essential to integrate technology-driven solutions that foster an inclusive and responsive approach to city governance. The Urban Planning Tool is a web-based platform designed to bridge the gap between local authorities and citizens, ensuring a collaborative urban development process.*

This system empowers residents to actively engage in urban governance by reporting real-time infrastructure issues such as potholes, drainage problems, and damaged public utilities. The platform provides a citizen interface for submitting geo-tagged reports with images and descriptions while offering an administrative dashboard for city officials to track, categorize, and resolve reported problems. Additionally, the tool incorporates a community-driven voting mechanism, enabling citizens to express their opinions on proposed urban projects and development initiatives.

Beyond facilitating direct communication between the public and authorities, the system ensures transparency and accountability by displaying issue statuses, voting results, and resolution progress in real-time. The integration of data analytics, geospatial mapping, and automation enhances decision-making, helping urban planners allocate resources more efficiently. Features like automated notifications, user authentication, and AI-driven insights further optimize the system's usability and impact.

The Urban Planning Tool is designed to be scalable, adaptable, and accessible across various urban environments. It supports mobile compatibility, ensuring users can report issues and participate in urban decision-making from any location. Future enhancements may include AI-powered predictive analytics, GIS-based spatial analysis, and historical trend tracking, further strengthening the system's role in proactive city management.

By leveraging modern technology, civic engagement, and data-driven governance, this project promotes a more inclusive, efficient, and participatory approach to urban planning, contributing to the vision of smart cities that evolve based on community needs and insights.

Keywords: Urban planning

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