

AI-Driven Urban Transformation: A Framework for Smart and Inclusive Cities in the Global South

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Abstract

As cities across the Global South struggle with rapid urbanization, socio-economic inequality, and infrastructural deficits, artificial intelligence (AI) has emerged as a promising catalyst for urban transformation. This paper presents a comprehensive examination of AI-Driven Urban Transformation: A Framework for Smart and Inclusive Cities in the Global South. Through a combined narrative and systematic literature review of peer-reviewed sources, the study explores the intersection of AI technologies, smart city initiatives, and inclusive urban development. Key themes include digital infrastructure, AI governance, citizen participation, data ethics, and socio-economic equity. While AI-powered systems have demonstrated potential in optimizing urban services, such as transportation, energy management, and public safety, their implementation often remains uneven and constrained by infrastructural and institutional gaps. The analysis reveals a pronounced digital divide, limited participatory mechanisms, and fragmented policy environments that challenge inclusive deployment. Nonetheless, successful case studies illustrate the importance of locally adapted, people-centered approaches that integrate ethical oversight and community engagement. This paper argues for a paradigm shift toward "Southern smart urbanism," where AI-driven innovation is aligned with developmental priorities, social justice, and context-specific governance. It concludes by identifying key research gaps and proposing a multidimensional framework to guide future studies and policy interventions, thereby ensuring that AI becomes a tool not only for efficiency but for equity in urban futures.

Keywords

Smart Cities, Artificial Intelligence (AI), Urban Transformation, Inclusive Development, Global South