

AI-Based Urban Planning for Smart Cities

Sujata M. Sanap¹, Prof. Trupti Bhase², Prof. Nanda S. Kulkarni³

Department of Computer Engineering ^{1,2,3}

Siddhant College of Engineering, Pune, Maharashtra, India

sujata.sanap2323@gmail.com

Abstract: *This document gives formatting instructions for authors preparing papers for publication in the International Journal. The authors must follow the instructions given in the document for the papers to be published. You can use this document as both an instruction set and as a template into which you can type your own text. Artificial Intelligence (AI) plays a vital role in addressing the challenges of rapid urbanization and sustainable city development. The motive of this study is to explore how AI technologies can enhance urban planning processes for smart cities. The method involves analyzing AI applications such as machine learning, predictive analytics, and Internet of Things (IoT) integration for data-driven decision-making in areas like traffic control, energy management, and infrastructure optimization. Key results indicate that AI-based planning improves efficiency, reduces resource wastage, and enhances real-time monitoring of urban systems. The study concludes that incorporating AI into urban planning not only supports sustainable development but also helps create intelligent, resilient, and livable cities capable of adapting to future demands*

Keywords: Smart city, Artificial Intelligence, GIS, Digital Twin, Urban planning, IoT

