

# Towards Smart Sanitation: A Comprehensive Survey of IoT, AI, and ML in Public Toilet Management

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**Abstract:** *This research paper presents a comprehensive review of literature surveys about the implementation of diverse technological approaches, including the Internet of Things (IoT), Artificial Intelligence (AI), and Machine Learning (ML), in the domain of public toilet monitoring systems. The study investigates the current landscape of monitoring technologies applied to public toilets, aiming to identify trends, challenges, and opportunities associated with each technique. Through an in-depth analysis of various literature surveys, the paper synthesizes the state-of-the-art advancements in IoT, AI, and ML as applied to public toilets, offering a nuanced understanding of the potential impact on hygiene maintenance, resource optimization, and real-time monitoring. The findings of this review contribute valuable insights for researchers, policymakers, and practitioners seeking to enhance the efficiency and sustainability of public toilet facilities.*

**Keywords:** Public Toilet monitoring, IoT, Machine Learning, AI

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