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Smart Public Toilet Management and Monitoring System using IOT

Kavita V Horadi[1], Mahima S[2], Shobhitha HL[3]
Assistant Professor, Department of Information Science and Engineering[1]
Undergraduate Students, Department of Information Science and Engineering[2,3]
Global Academy of Technology, Banglore, India.

Abstract: *This paper addresses the pervasive issue of inadequate public sanitation in various regions of India and slums, marked by rampant urination and poorly maintained public toilets. Despite significant governmental expenditure and efforts to maintain cleanliness, the absence of a centralized monitoring mechanism renders these endeavors ineffective. To overcome this challenge, the paper proposes an Internet of Things (IOT)-based toilet monitoring system utilizing a web server and a mobile cleaner application. The system aims to simplify monitoring processes for toilet cleaners and administrators by tracking multiple cleaning metrics and providing real-time alerts based on user input. The motivation behind this project stems from the alarming state of hygiene in government schools, where students or teachers often bear the responsibility of cleaning due to labor shortages and insufficient funds. The relevance of the proposed system lies in its potential to revolutionize the maintenance of school and public toilets, addressing the unhygienic conditions prevalent in India. The novelty of the system includes features like automatic water flush, UV sanitization, timely floor cleaning, automatic sanitary pad vending, water monitoring, smell detection, and automatic ventilation, all facilitated through IOT technology. By presenting a cost-effective and efficient solution, this research contributes to the improvement of public sanitation in various settings, including homes, schools, colleges, hospitals, businesses, and industries, thereby promoting urban sanitation in the contemporary environment.*

Keywords: sanitation, public toilets, government school, hygiene, automatic water flush , data monitoring, real time tracking.

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Bina Nusantara University, Jakarta, Indonesia 11480 2Computer Science Department, School of Computer Science, Bina Nusantara University, Jakarta, Indonesia 11480

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amvencinas@mymail.mapua.edu.phm , dmnivera@mymail.mapua.edu.ph, lkgsamala@mymail.mapua.edu.ph, ebblancaflor@mapua.edu.ph

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