Solid-Waste Management System for Urban Sri Lanka using IoT and Machine Learning

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Abstract

Solid waste management has become a serious concern in urban areas of Sri Lanka. This paper arises from a study that aims to identify an ICT-based solution for managing solid waste effectively. This solution mainly includes features such as locating common waste hotspots and displaying them on a map, for collecting garbage, developing a dynamic schedule developing an IoT- based smart component to identify the overflowing garbage bins by and automatically notify the municipal council, and a service rating mechanism for garbage collectors. To bring these solutions together, on a single platform, a web application has been designed and developed with all the necessary features. The projects end goal is to manage disposal methodically before the problem becomes worse and to appraise trash collectors for their service. The findings of this study contribute to the practice and literature on ICT for Development.

Keywords

IoT, Solid Waste Management, Garbage Collection, Garbage Hotspot, Smart Bin, Sri Lanka