

Bin-Eazy: The Tracking-Based Solid Waste Collection System

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The majority of developing countries, including Sri Lanka, are still struggling to manage solid waste, resulting in a slew of social, environmental, and health issues. In Sri Lanka, as in the majority of other nations, the responsibility for waste management is delegated to Local Authorities (LAs). With rising solid waste quantities, Sri Lanka is now struggling to manage trash. This research aims to develop an automated solid waste management collection Mobile application named “Bin-Eazy” and a Web application to reduce the above situation in Sri Lanka. These applications facilitate both the Municipal Council and the citizens to avoid the problems that arise during waste collection. This methodology for the improvement of the waste collecting and transportation system was devised based on Google Map API. This system includes a mobile application to organize garbage in various locations. We can communicate directly with the Municipal Council and provide information on the location of the garbage bins or dump with this mobile application. Python, Image Processing, Flutter, SQLite, react are technologies that were used in this project. Image processing is the technical analysis of images by using complex algorithms. The municipality uses image processing to check whether the citizens have correctly classified the garbage. This system mainly focuses on household solid waste. In a country like Sri Lanka, both residents and municipal councils may save time and money by using this mobile application to collect solid waste. Those are the expected primary goal of this paper.

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