

Auto-Garbage Segregation

Ricarda Rose S. Yusi

I. INTRODUCTION

Considering the hazards caused by the common method of waste disposal an automatic waste segregate is designed to overcome this. Here waste is pushed through a fold into the framework and for the recognition of waste, an IR sensor is utilized. As the IR sensor recognized waste, microcontroller turn the DC (Direct Current) motor to ON state and the waste processed through the inductance coil and capacitive sensing module, and then the waste is classified to Biodegradable and Non-Biodegradable based on relative permittivity of waste kept in a circular base driven by DC (Direct Current) geared motors. Introducing a solution for the segregation and collection of solid waste. The proposed system is a mobile unit whose motion is controlled by the user using the GUI (Graphical User Interface) and wireless interface. Metallic wastes are separated by the electromagnet attached to the motor-controlled arm and the dry waste is blown off using a DC (Direct Current) air blower directed by a flap. The IR sensor detects the waste and sends information to microcontroller. The information is accepted using radio frequency (RF)

receiver and the data is decoded by the decoder, and in the transmission side controller receives the information and transmits the data using the encoder and an RF (Radio Frequency) transceiver, the data is displayed on mobile unit. The microcontroller is used, the model consists of a stationary unit the waste is collected into a funnel shaped collector. Sensors are placed on this funnel. This paper proposes an advanced trash collection system with smart bins having sensors and that alerts the authorized collector by sending messages for efficient trash collection in cities, IOT (Internet of things) is acting as a back born technology for the efficient management of waste. The system will receive the input through the dust collecting people through switches and sends back a signal to the microcontroller unit using RF (Radio Frequency) technology. A robotic arm functions when metal is recognized. Here presents a waste collection method based on providing intelligence to trash cans, by using an IoT prototype embedded with sensors. The waste management as a set of services on top of an IoT infrastructure in a smart city. These services cover the waste collection planning and implementation, transport of waste to specific locations and recycling and preparation for reuse with the help of RFID (Radio Frequency Identification), sensors and actuators. This work presented here gives a novel approach in handling and disposing of the daily

solid wastes in an efficient method. The system consists of four main systems, namely smart trash system, local base station, smart vehicle system and smart monitoring and controlling hut. The segregation part contains sensors to separate into Biodegradable and Non-Biodegradable.