**Waste Management System**

The tremendous increase in the population of the country has led to improper waste management in cities which results in increased pests and spreading of very harmful and diseases across the regions. Though proper measures are being taken to avoid wastage at the production level in industries, but the waste generated from using such goods are not disposed of properly. People are unaware of the issues caused by their careless waste disposals. They affect animals, aquatic creatures, environment and ultimately contributing to climate change. Thus, the project proposes a smart waste management system based on machine learning prediction model that will help people on how to dispose of various kinds of waste and also tracks the amount of waste produced by each home and region. These data will help the respective authorities to take necessary actions to reduce waste generation.

The functionalities provided by our system will be as follows

* + Tracking the amount of waste generated from each house and each municipality.
  + Prediction of the amount of waste generated for the next week using Artificial Intelligence/Machine Learning models.
  + Methods to dispose of biodegradable and non-bio-degradable wastes efficiently.
  + Maintenance of a completely robust and efficient database to track all the information on waste generation and disposal.
  + Managers of dumps and recycling factories can publish their possibilities or needs in acquiring a certain amount of waste for storing or recycling.
  + A grievance system for people to submit any kinds of suggestions/problems regarding waste management in their locality.

The modules in the proposed system as follows

* + Minimalistic and elegant, interactive user interface.
  + Database to store/view/retrieve the details collected from each house and locality.
  + Online Portal to report problems and give suggestions on waste management.
  + State of the art Machine Learning model to forecast future waste production from each house/region.

Benefits of the proposed system

The waste management system provides an efficient portal for monitoring, collection, and disposal of wastes from each house and locality. Moreover, the data helps the authorities to take necessary actions beforehand. The customized prediction model developed will suggest the amount of waste generated in next few days.

**Name of the Team: CURIE**

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**Development Platform:**

* For Database - mySQL
* For User Interface - Website (HTML/CSS, Javascript)
* Frontend - React.js, Bootstrap
* Backend - Express.js, Node.js
* Machine learning - Python, Keras, Tensorflow

**Approved By:**

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