

Project Report
on
FOOD MANAGEMENT SYSTEM

*Submitted in partial fulfillment of the
requirement for the award of the degree of*

BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING



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INDIA

DECEMBER, 2021



**SCHOOL OF COMPUTING SCIENCE AND GALGOTIAS
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CANDIDATE'S DECLARATION

I hereby certify that the work which is being presented in the project, entitled "**FOOD MANAGEMENT SYSTEM**" in partial fulfillment of the requirements for the award of the **BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING** submitted in the School of Computing Science and Engineering of Galgotias University, Greater Noida, is an original work carried out during the period of month, Year to Month and Year, under the supervision of Name... Designation, Department of Computer Science and Engineering/Computer Application and Information and Science, of School of Computing Science and Engineering , Galgotias University, Greater Noida

The matter presented in the thesis/project/dissertation has not been submitted by me/us for the award of any other degree of this or any other places.

PARTH BHARDWAJ,19SCSE1010154

This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Supervisor Name

Designation

CERTIFICATE

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Signature of Examiner(s)

Signature of Supervisor(s)

Signature of Project Coordinator

Signature of Dean

Date: DECEMBER, 2021

Place: Greater Noida

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CHAPTER-1

ABSTRACT

This project was implemented to quantify the amount of organic waste produced in staff lunch rooms and assess the impact of separating and treating this waste.

The project also incorporated investigation of behavioural barriers to implementing organic waste recycling, analysis of the impact of treating commercial and college waste streams and comparison of treatment technologies.

Initially, staff from 11 different lunch rooms volunteered to manage compost bins, emptying to central locations weekly. Over the duration of the project, 4 more lunch rooms and 3 coffee shops came on board.

This number continues to increase via word of mouth. On average, 0.1 kg/staff member/week and 20 kg/food outlet/week was collected. Throughout the project, 1.5 tonnes of food waste was diverted from landfill to compost.

It was found that every tonne of organic waste diverted from landfill avoided the loss of 1.663 t CO₂ (a 34 fold reduction), 13.6 kg nitrogen and 3.5 kg phosphorus. Over the project, this is equates to a *CCO₂* equivalent of driving around the entire coast

of Australia and a fertilizer value of over \$1000. It is expected that with full staff, college and food outlet uptake, these values would increase 10 fold.

A sensitivity analysis showed that the majority of emissions resulted from organic decomposition, with a very small fraction resulting from transport.

Aims and Objectives

This project has four core aims:

1. Provide staff with the opportunity to manage food waste in their staff rooms
2. Educate staff on the impacts of sending food waste to landfill
3. Developing a report estimating campus wide organic waste production and impacts of improved management
4. Collaborate with a research project which aims to identify hurdles in understanding of organic waste and the impacts of education on environmental and public health. The latest national food waste assessment indicates that lack of data and understanding ar

INTRODUCTION

FORMULATION OF PROBLEM

REQUIREMENT FOR THE MODEL

The problem we see here is of how food around us is wasted, even after having enough food to feed everyone, there's still hunger around us. The solution we are focusing on is not of the field, but to stop the wastage happening around us. The proposed scheme is to build an outline which contains general information to tackle similar kinds of problems. Just by taking a few initiatives we were actually able to reduce the food wastage in our hostel messes.

A project by the students for providing long term solutions for reducing food wastage . The techniques they adopted for the same is:

- Determining the size of the food is trashed •

Exploring why the food is wasted •

Using new techniques like artificial intelligence on accurate data .

METHODOLOGY

The following methodology will be followed to achieve the objectives defined for proposed research work:

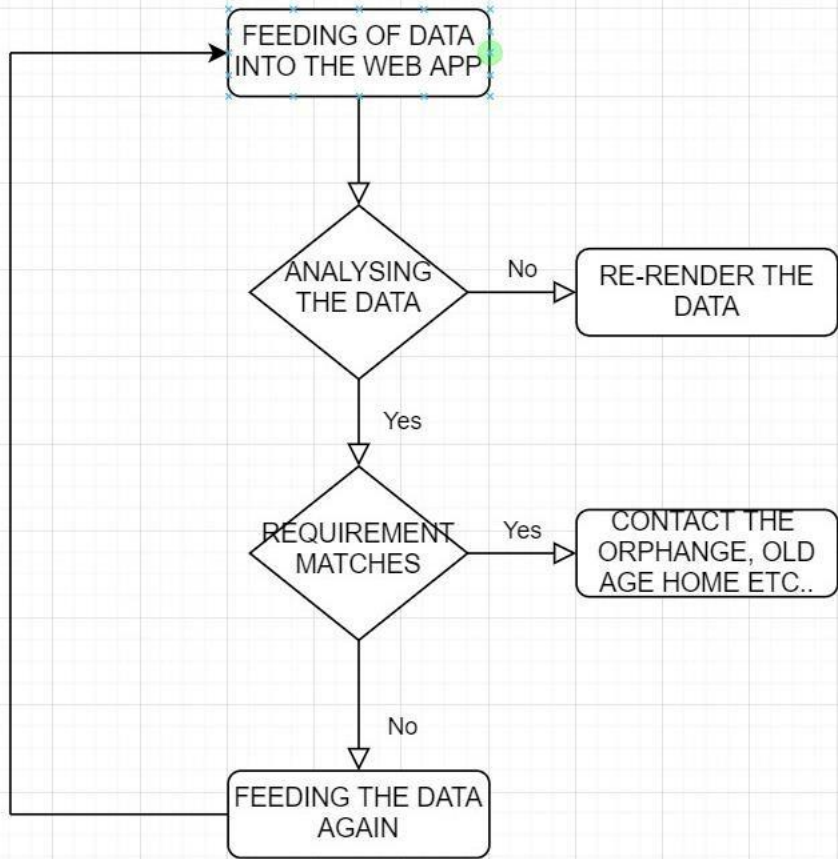
- i. Detailed study of food wastage in the hostel mess will be done. ii.
- ii. Data would be collected and then cleaned to be used.
- iii. iii. Various parameters like artificial intelligence will be identified to evaluate the proposed system.
- iv. Comparison of new implemented approach with existing system approaches will be done.

KEYWORDS --

1) DATA ANALYSIS

2) MACHINE LEARNING

2) ARTIFICIAL INTELLIGENCE



CHAPTER 2

Project Overview

The project was divided into four categories:

- 1) Immediate change – Engage staff with a survey and enable willing staff to recycle their food waste by providing bins, weekly collection and information about what to compost and why. This bottom up phase is supported by staff and student volunteer efforts. Composting was already occurring at the Rotary College .
- 2) Business case - Quantify the mass of organic waste generated from staff lunch rooms and combine this with estimates from colleges and campus businesses. This data will be processed using life cycle analysis techniques, assessing a variety of technologies. Sensitivity analysis will also be used to identify what variables most affect recommendations so people can gauge how applicable these results might be to their own scenarios.
- 3) Behavioural change – Survey results and collaboration with JCU public health researchers will identify barriers to organic waste recycling. Results will inform a communication plan addressing social and environmental influences on people's organic waste recycling habits.
- 4) Reporting – All results will be reported to JCU management to prompt formal organic waste management procedur

TOOLS AND TECHNOLOGY USED

SOFTWARE REQUIREMENT SPECIFICATION:

JAVASCRIPT

- REACTJS

Libraries

- *TENSARFLOW.JS*
- Chart.js
- D3.js(Data driven document)

Literature Survey

The upgraded system is a real-time system. It uses data predictions for coping with the food wastages happening . The user can observe and manipulate the data using the analysis and thus ,the providers can seek the help and go out for the food as per their needs .

The application is designed for handling the multiple cases of data sets and thus giving an upper edge for the user .Whenever a users need gets detected. To identify the , suitable algorithm is issued.

This program focuses on building a non-disruptive system that can detect need and help us with th issue and helps resolving the food wastage problem and issue a warning on time.

Reference

Publication/ Screen Shots



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