A Systematic Research on Food Processing Web Application

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Abstract - This paper uses a Systematic Investigative Approach, Application Developmental Test Studies and Conclusions drawn from the results displayed post development process to check and in turn show how the new technological overhaul in the Food Processing Industry enhances the performance of the entire system built around the industry. We test the thesis with the help of our own developed Web Application which is built as an aggregator of farming companies that is aimed at enabling manufacturing companies of all scales to get substantial exposure both and cost efficiently and vice versa.

Keywords - **Food Processing, Recommendations, files, Machine Learning, Confidentiality, Authentication**

1. INTRODUCTION

The existing system around the relation between Food Manufacturing Companies and the Farming Companies have been observed to be quite unorganized, outdated and even faulty even by some industry experts. It has been quite evident that it's been difficult for the manufacturing companies and farming companies both to get exposure to each other and an organized environment which would be a win-win situation for both the entities. After a certain deal is done between the two entities even then it has been noticed that the transaction between them is not quite efficient pertaining to the current system. Since the current system is dominated by the traditional Mandis, It is difficult for the Farming Companies to conduct effective transactions with Manufacturing Units since the mandis drive up the transaction cost and also takes more time to initiate and complete the transactions. This is where the axiom of power of technology gets tested ironically. Like in all other industries and fields, a technological overhaul has time and again proven to be more powerful and efficient than the predecessor both in terms of resources and money. The same is bound to happen in the food processing sector with the system being digitized with the use of one of the dominant solutions called a Web Application Technology. We bring the axiom into play by testing the value provided by our own Web Application which targets the Food Processing Industry and thereby also putting up the technical aspects of the Application so that the working and the inherent structure of it could be better understood corresponding to the business value it provides to both, the Farming Companies and the Manufacturing Companies.

The theory was tested by observing three parameters:

1) How much business value does the App provide to both the business entities as compared to the traditional systems both in terms of cost and time efficiency?

2)What is the overall convenience and ease offered by the App to them?

3) What is the optimal speed and quickness at which the App is able to provide services and satisfy both the business entities?

2. METHODOLOGY

The Proposed System aims to solve the problem of food Suppliers by providing a platform for them to choose between the best priced and most convenient Food Processing Units.This system can recognize different text for the ease of Food Suppliers at any location. Results of the entered data will be displayed according to the relevancy. A few images of the selected location will be displayed along with its detailed description so that the users can make calculated decisions based on the information provided. This system will connect the Food Suppliers with the Food Processing Industry by eliminating the middle agents and mandis.

The key Factors for implementation of the project:

1.Choice of the programming languages to be used for specialized purposes.

2.Choice of the platform to be used for effective functioning and accomplishment of individual goals.

3.Choice of the business logic and technique to be used for efficient and accurate processing of the data and the information provided.

    I.   A. **Workflow Of Project**

The Design of the application provides various options of the Food Suppliers to the food Manufacturers through data connectivity.The raw ingredients entered by the Food Manufacturers and their budgets are processed and the results regarding the best priced and conveniently located Food Suppliers are displayed to the Food Suppliers.

The operations are divided into 3 parts:

1. Recognition of the text the user enters the data in.

2. Processing of the raw material data and the budget entered by the Food Manufacturer.

3. The processed data is matched to the most closely satisfying locations.

Finally the results are displayed to the user to choose between them.

a. **Platform for Entering Raw Materials:**

Provide the Manufacturers a platform for entering the available raw materials, their planned budget, and options for locations for convenience.

Fig. 1

b. **Working**

Based on the input provided by the Manufacturers the Web App will analyze the data of the supplier and give recommendations of the Food Suppliers that would be in the best interests of the Food manufacturers..

3. EXPERIMENTAL STUDY

In this, the web application will be tested with different inputs to check whether the platform provides desired and relevant results as expected to happen.
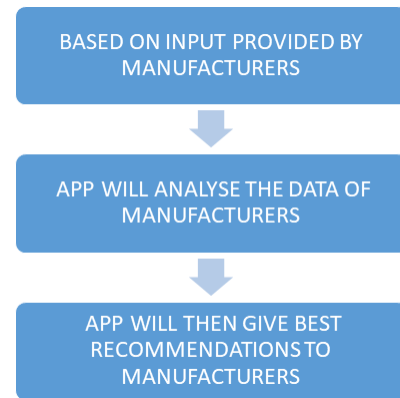

Fig. 2

c. **Provides Recommendations Based On Input:**

The recommendations could be based on the nearest locations and based on the best affordable prices which would be up to the Manufacturer.

Fig. 3

The table below shows the results' as follows:

PORTAL	I/P NO.	I/P PRODUCT	I/P LOCATION	I/P PRICE RANGE	O/P	O/P RELEVANCY CHECK
USER SIDE	1	Potato	Mumbai	100-200	Potato	Yes
USER SIDE	2	Tomato	Mumbai	100-200	Tomato	Yes
USER SIDE	3	Spinach	Thane	200-300	Spinach	Yes
USER SIDE	4	Mango	Thane	400-500	Mango	Yes
USER SIDE	5	Apple	Navi Mumbai	300-500	Apple	Yes
ADMIN SIDE	6	Tomato	Thane	100	Tomato-Thane-100	Yes
ADMIN SIDE	7	Potato	Mumbai	200	Potato- Mumbai-200	Yes
ADMIN SIDE	8	Spinach	Navi Mumbai	250	Spinach-Navi Mumbai-350	Yes
ADMIN SIDE	9	Mango	Thane	420	Mango-Thane-420	Yes
ADMIN SIDE	10	Apple	Mumbai	350	Apple-Mumbai-350	Yes

4. CONCLUSION :

Thus with the help of the accuracy and efficiency provided by the Web Application combined with the convenience and cost effectiveness of this technology, the farming industry and the manufacturing industry are set to connect better and quickly as the aims of this platform is not just to act like a contractor between the two entities but to actually connect the two core industries from the very roots to each other . With all the technical superiority that the web technology has to provide, the traditional system is destined to evolve as the favourable conditions are upon the system since the farm laws reforms have been manifested. Hence we can say that just like any other industry or even merely a process, the power of technology can be channelled and applied on the system around the system that's been helping carry out the trade between the farming business and the manufacturing business.

5. REFERENCES

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