1 INTRODUCTION

1.1 Overview

A food delivery service has to deal with a lot of perishable raw materials which makes it all, the most important factor for such a company is to accurately forecast daily and weekly demand. Too much inventory in the warehouse means more risk of wastage, and not enough could lead to out-of-stocks - and push customers to seek solutions from your competitors. The replenishment of majority of raw materials is done on weekly basis and since the raw material is perishable, the procurement planning is of utmost importance, the task is to predict the demand for the next 10 weeks.

1.2 Purpose

The main aim of this project is to create an appropriate machine learning model to forecast then number of orders to gather raw materials for next ten weeks. To achieve this, we should know the information about of fulfilment center like area, city etc., and meal information like category of food sub category of food price of the food or discount in particular week. By using this data, we can use any classification algorithm to forecast the quantity for 10 weeks. A web application is built which is integrated with the model built.

2 LITERATURE SURVEY

2.1 Existing Problem

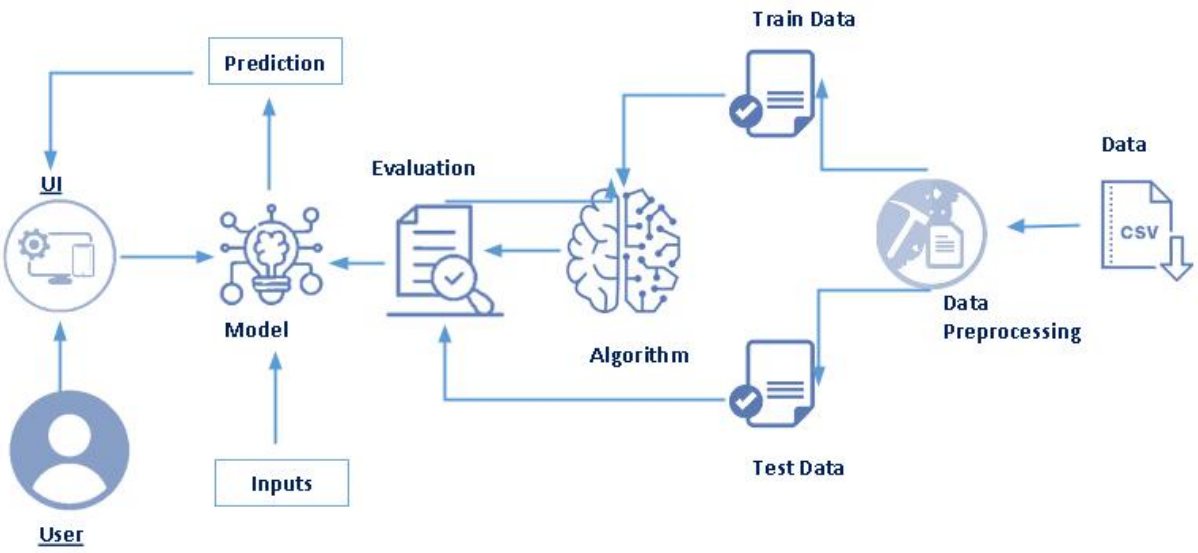
The food is not available at right place at right time if available then the quantity of food is more enough and then sales is not much more. So the optimized amount of food should be available at right place and at right time.

2.2 Proposed Solution

To come out from the existing problem the proper analysis of the food requirement should be analysed. The requirement analysis should be done with the past dataset containing the lack and exceed amount of food at different places with reference of time. After getting the dataset, we have to make an optimized predictive model which can give the future requirement of food demand at right time.

3 THEORITICAL ANALYSIS

3.1 Block Diagram



3.2 Software Designing

Software requirements of the project:

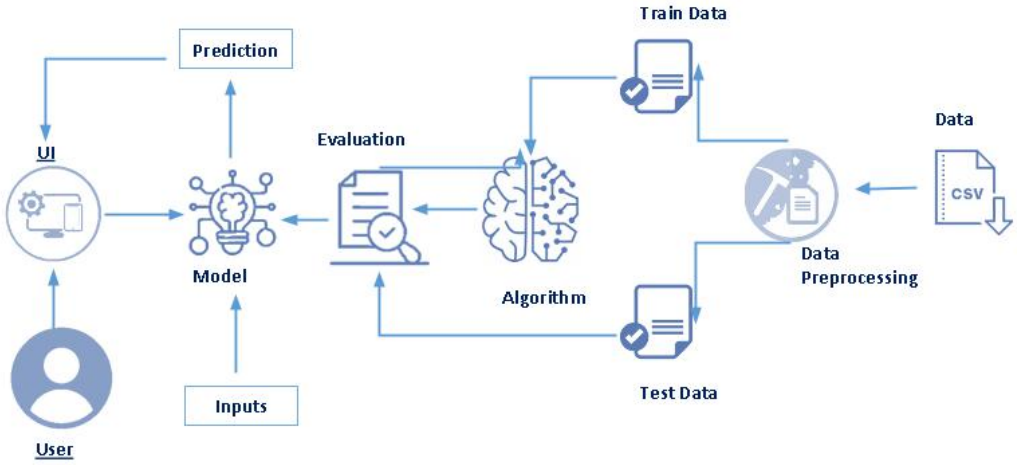
1. IBM Cognos Analytics
2. IBM Cloud
3. Jpyter Notebook
4. Anaconda
5. Kaggle Dataset
6. VS Code

4 EXPERIMENTAL INVESTIGATIONS

4.1 Analysis

While working on the project, we got to know many trending trends in the market. The working predicting model gives a different insights of the demand of perisable food items. The correct requirement plays a vital role in the emerging market.

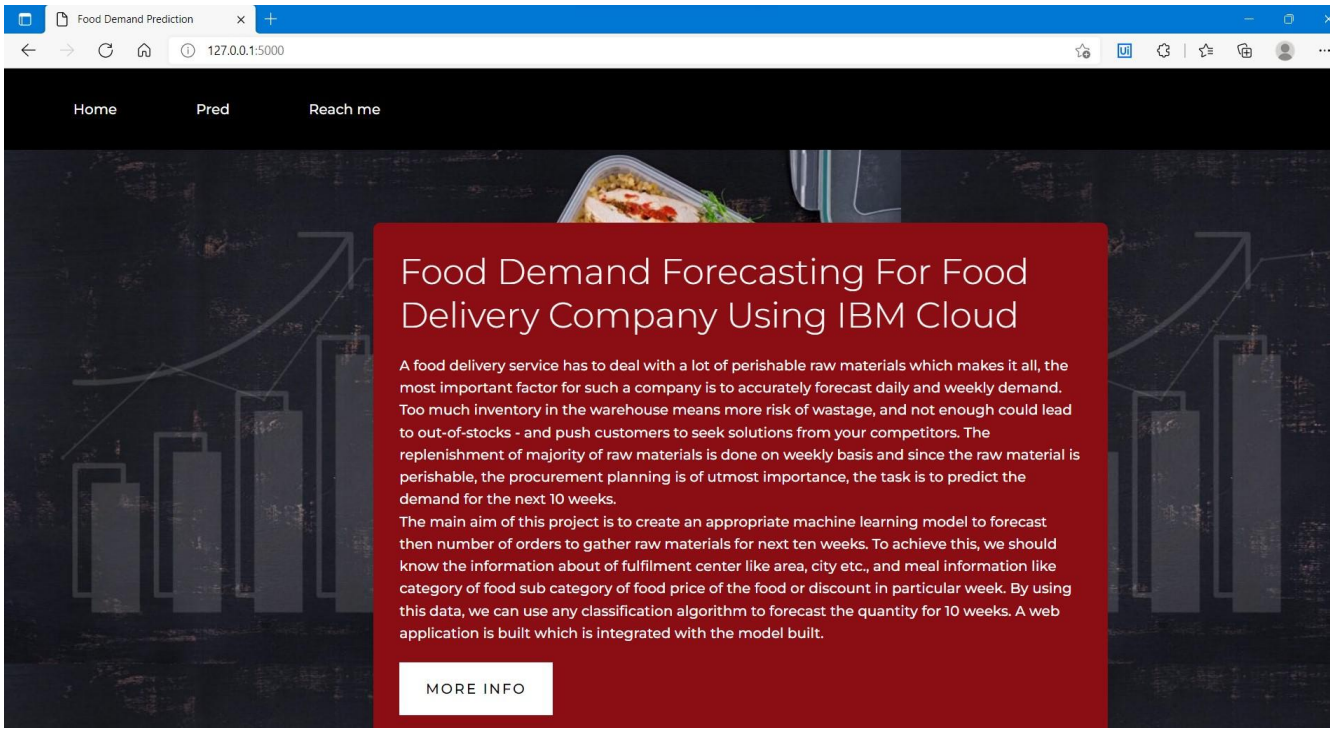
5 FLOWCHART



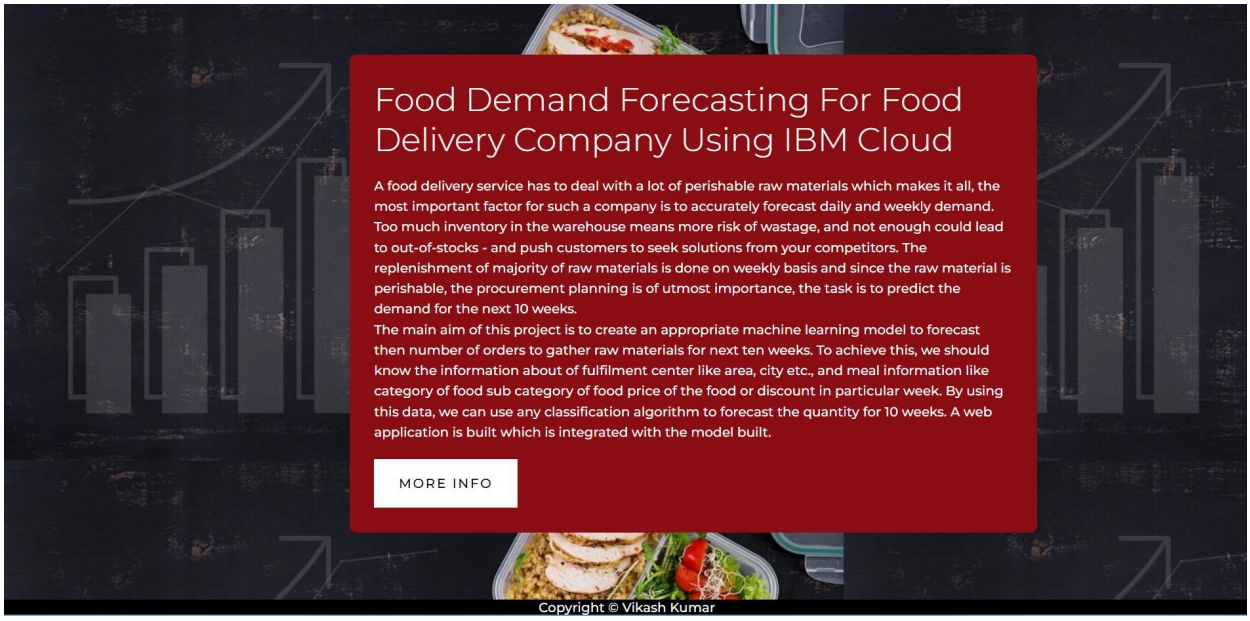
6 RESULT

We have made an accurate predictive system for the analysis and prediction of the food demand in different food items and at different places.

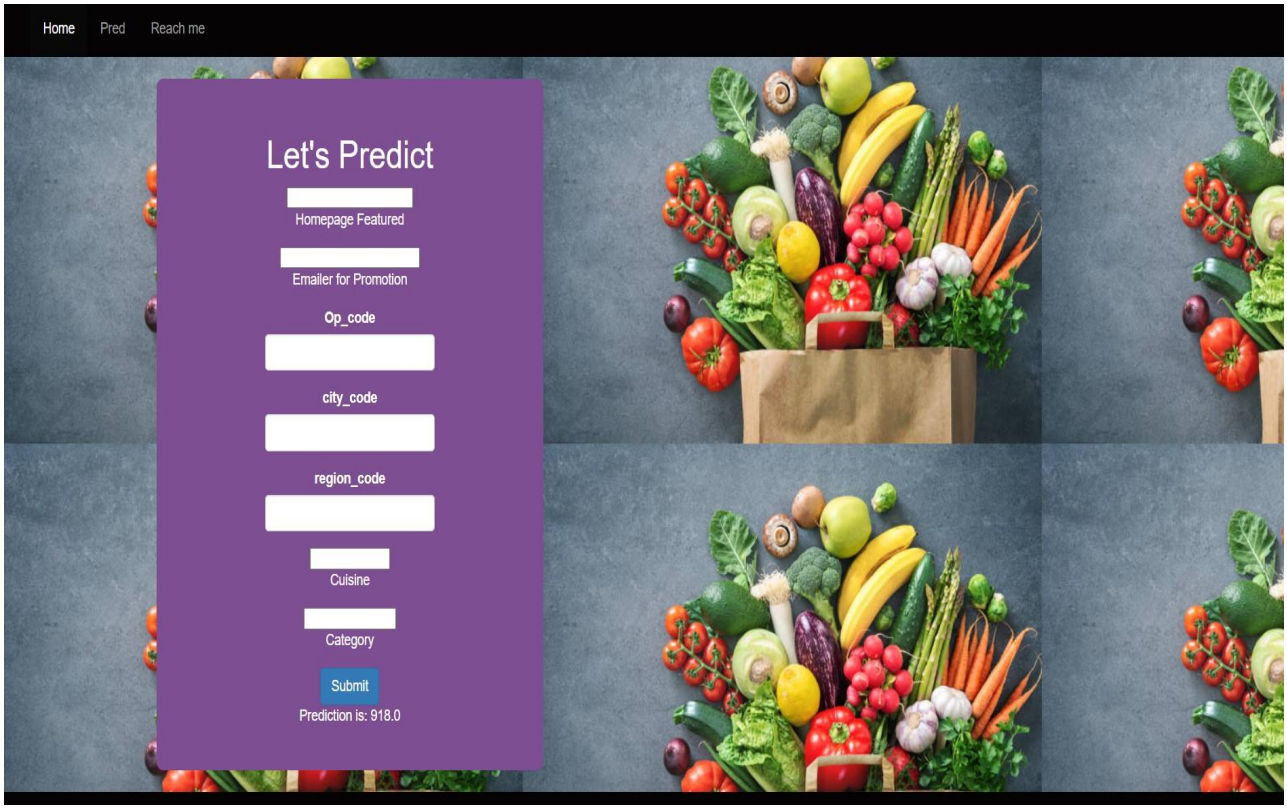
Screenshots:
Screenshot 1:



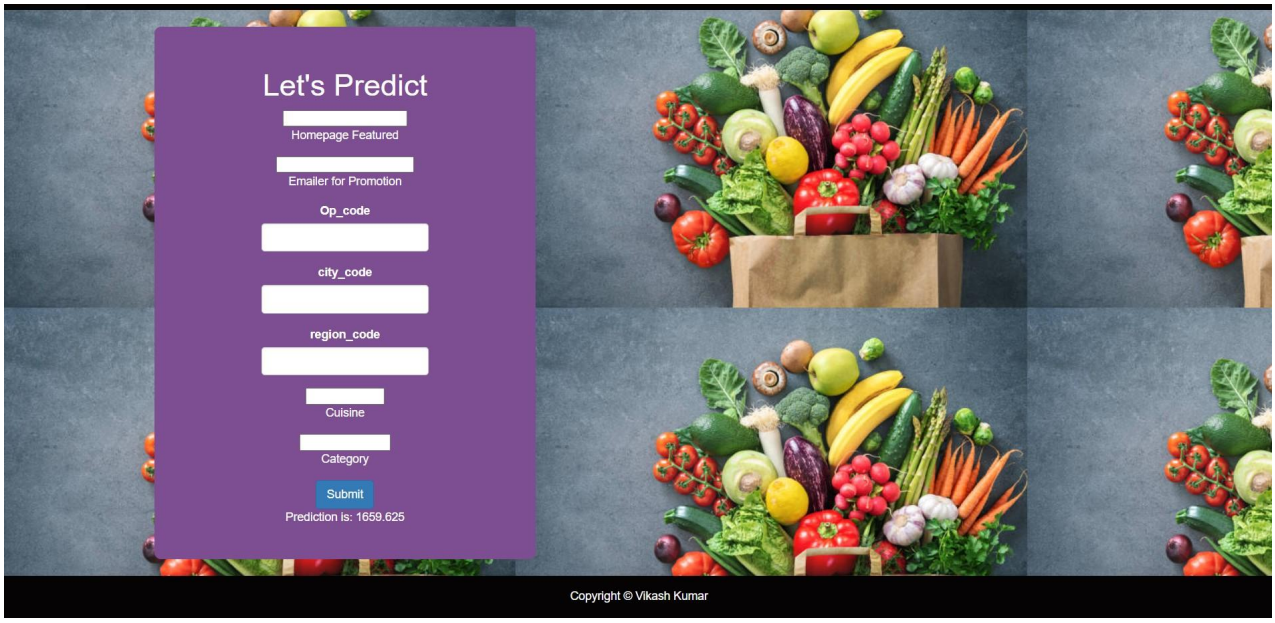
Screenshot 2:



Screenshot 3:



Screenshot 4:



7 ADVANTAGES & DISADVANTAGES

The advantages of the proposed solution are as follows:

* The company or institute will know the future requirements of different food items at different places.
* The customer will get the required food item without any problem.
* The food wastage will went very minimal.

The disadvantages of the proposed solution are as follows:

* The people should know the food item which will be needed.
* The model is not 100% sure for the prediction.
* There may be any unforeseen situation where the model may give wrong decision as it is not considered while preparing.

8 APPLICATIONS

There is multiple applications of the proposed solution:

* The company will make a lot of profit.
* The company will be able to optimize the right resources at right time.
* It will also help the customer to get it's required items as per their requirements.

9 CONCLUSION

The main moto is to save the wastage of food. It takes a long time and effort for the farmers to grow the food raw materials. The availability of the food items make the society better. Our proposed model will definitely add values to the company to provide and serve it's valuable customer and make a strong position while competiting with the different competitors.

10 FUTURE SCOPE

We will work to make the model give more precisely result at different situations. We will train our model with different algorithms to give more accuracy with it's forecast.

11 BIBILOGRAPHY

1. https://www.kaggle.com/arashnic/food-demand
2. https://www.ibm.com/docs
3. https://www.youtube.com/hashtag/smartinternz

Demostration Link:
https://drive.google.com/file/d/1ywfz_aDpjRvYWubI6-evyLTc5fnDavPG/view?usp=sharing

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