

# LITERATURE SURVEY

## TEAM DETAILS:

**Team No** : PNT2022TMID44529  
**College Name** : J.K.K.Nattaraja college of engineering and technology  
**Department** : B.tech Information Technology

**Project Title :** DemandEst - AI powered Food Demand Forecaster

**Team Leader** : Rupesh.R

**Team Member 1** : Gokul Kannan.R

**Team Member 2** : Mayilsamy.M

**Team Member 3** : Prabhakaran.T

**Team Member 4** : Sonthosh.K

# PROJECT DESCRIPTION

- A food delivery company has to deal with a lot of perishable raw materials. Thus it is very important for such a company to accurately forecast daily and weekly demand. We have seen the problem of unbalanced demand and supply in food delivery industry. We always wanted to solve this problem, so this our chance to represent our idea and solution.

# WHAT IT DOES

- We created website using an appropriate machine learning model, to forecast number of orders to gather raw materials for next few weeks. The prediction model is a generalized model which means other companies or services can rebuild this model according to their data. In the web application, a separate section called 'inventory management' is for restaurants where they can log in/sign up and can keep record of available inventory and also manage their customers and orders.

# EXISTING MODEL

- LONDON--([BUSINESS WIRE](#))--Infiniti Research, a market intelligence solutions provider, has recently announced the completion of their latest [\*\*demand forecasting solution for a food manufacturing company\*\*](#). During the course of this engagement, the experts at Infiniti Research helped the client to efficiently meet the market demand by keeping adequate stocks. Also, the study highlights how Infiniti's demand forecasting solution helped the food manufacturing company to increase supply chain efficiency, improve labor management, and manage cash flow better.

# DEMAND FORECASTING SOLUTION FOR A FOOD MANUFACTURING COMPANY

INFINITI RESEARCH

CASE STUDY



## BENEFITS

Helped meet customers' demands and enhance CX

## PREDICTIVE INSIGHTS

Planning production, financing, labor, and inventory operations

## BUSINESS CHALLENGE:

To tackle supply chain challenges, speed up production cycle, and drive sales

# THE BUSINESS CHALLENGE

- The client is a food manufacturing company based out of the United States. The client constantly faced issues of stock-outs. With this, they had to deal with unplanned production changeovers to keep up with the business. The client was also having difficulties in managing labor and planning inventory operations. Owing to these challenges, the company witnessed a dip in their sales rate. Therefore, the client approached Infiniti Research to leverage their expertise in offering demand forecasting solution. With Infiniti's demand forecasting solution, the food manufacturing company wanted to tackle supply chain challenges, speed up production cycle, and drive sales.

# THE EXISTING SOLUTION

- The experts at Infiniti Research conducted qualitative and quantitative market research, analyzed client's sales data for the past 5 years, and also analyzed competitors in the US food manufacturing industry. With Infiniti's demand forecasting solution, the client was able to accurately forecast the sales demand and manage inventory. This reduced stock-outs of products. This further helped them in better labor management. Also, with Infiniti's demand forecasting solution, the client was able to better manage warehouse and cash flows.



# ADVANTAGES

1. You'll gain valuable insight
2. You'll learn from past mistakes
3. It can decrease costs

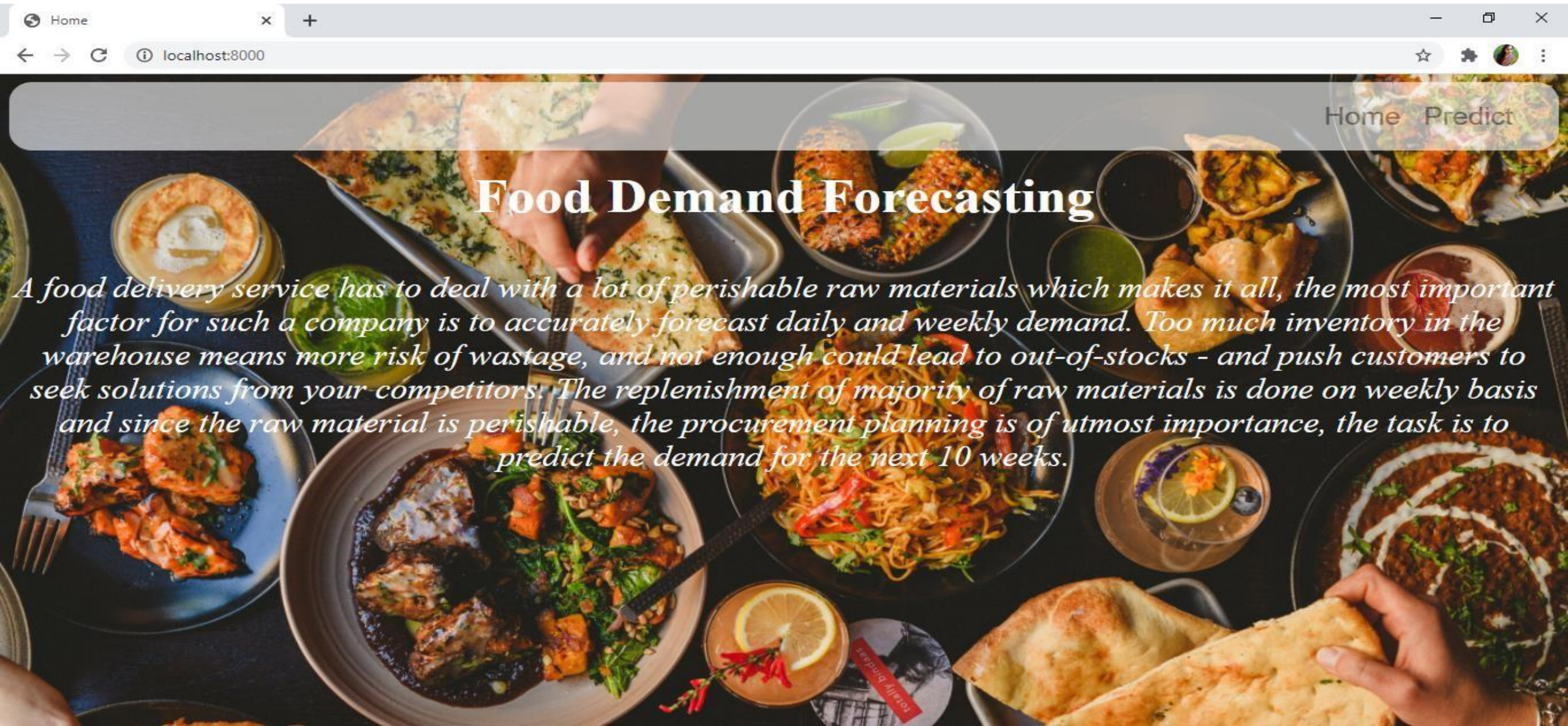
# DISADVANTAGES

1. 1. Forecasts are never 100% accurate
2. It can be time-consuming and resource-intensive
3. It can also be costly

# CONCLUSION

- The main moto behind this project is to reduce food wastage. The availability of the food items makes the society better. Our proposed model would definitely come handy to a company for predicting the number of food orders and help them to serve their customers better.

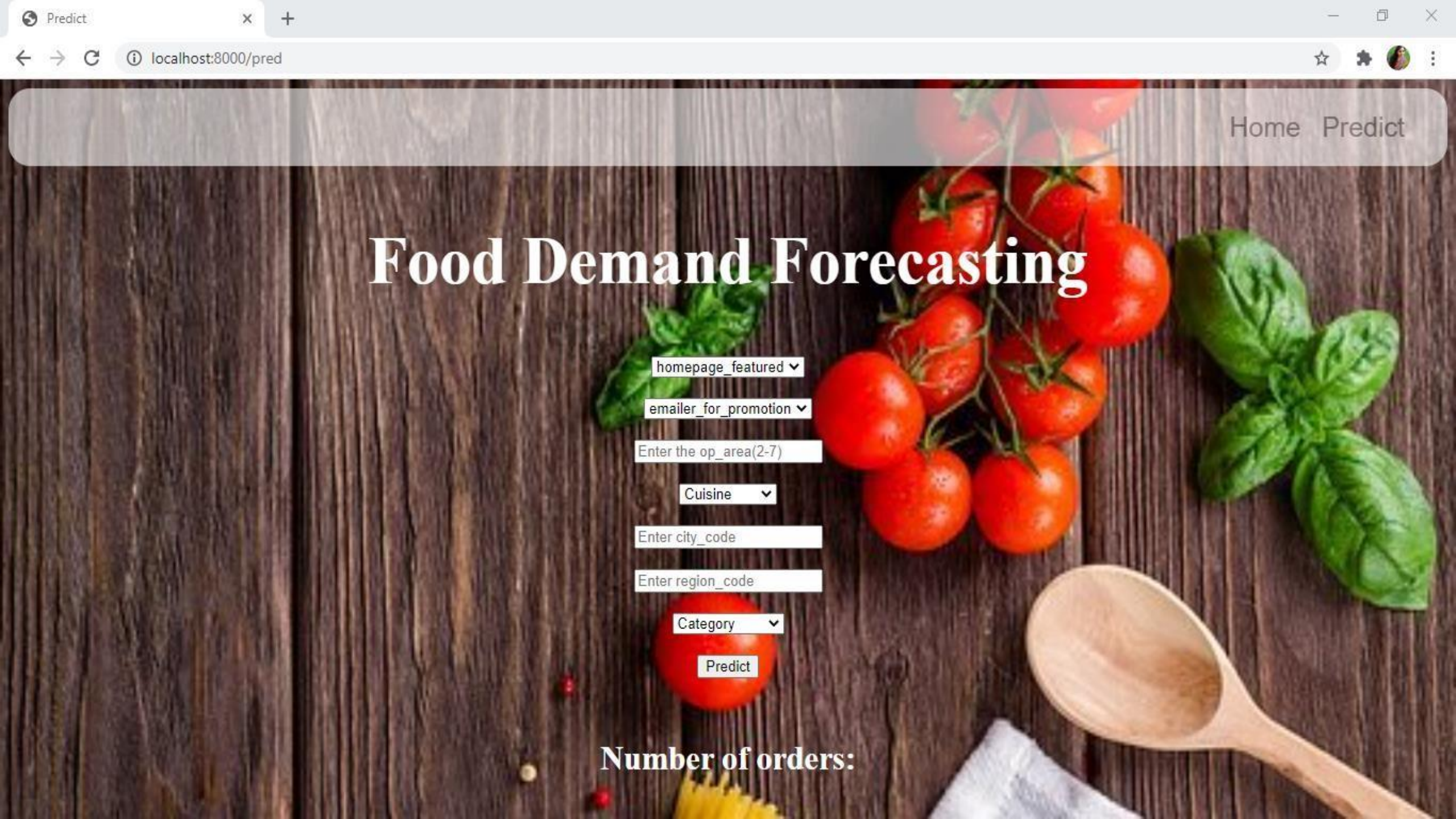
# THE PREDICTED OUTPUTS



## Food Demand Forecasting

*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.*





# Food Demand Forecasting

homepage\_featured ▾

emailer\_for\_promotion ▾

Enter the op\_area(2-7)

Cuisine ▾

Enter city\_code

Enter region\_code

Category ▾

Predict

Number of orders:





# Food Demand Forecasting

Yes

Yes

3

Indian

480

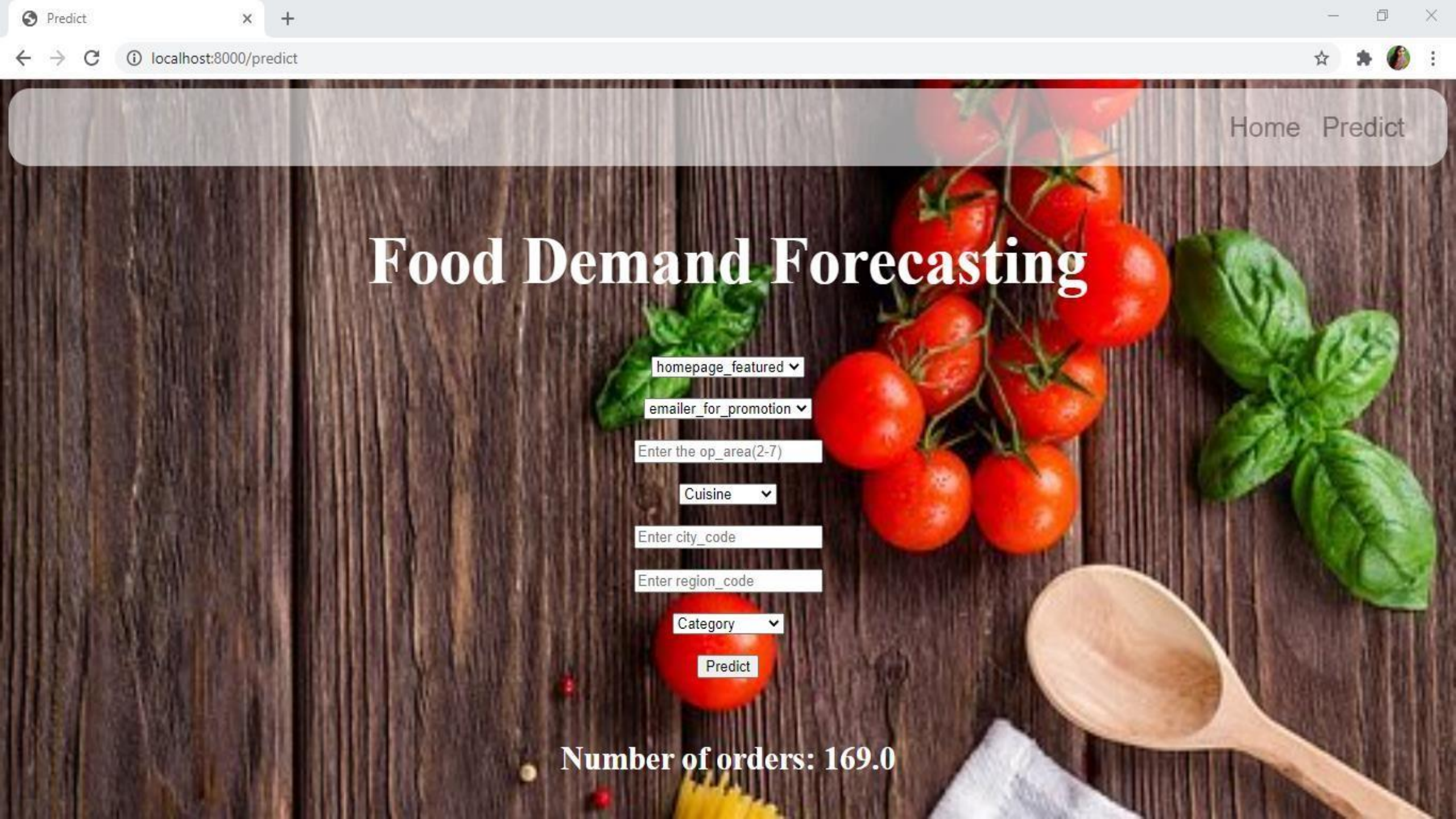
56

Biryani

Predict

Number of orders:





# Food Demand Forecasting

homepage\_featured ▾

emailer\_for\_promotion ▾

Enter the op\_area(2-7)

Cuisine ▾

Enter city\_code

Enter region\_code

Category ▾

Predict

Number of orders: 169.0

THANK YOU !