LOGISTICS NETWORK SUPERINTENDENCE BASED ON KNOWLEDGE ENGINEERING

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Abstract –*The prediction is the important factor in business. If the predicted percentage is below the threshold level, the quality check will not be performed. This will help the companies to focus on quality checks. To control the end product quality and optimize inspection costs, the prediction process is used. Machine learning gives reliable ,high quality and timely information about prediction. Software should integrate with supplier and manufacturer system to automatically collect and process a data. It should be checked and audited manually to ensure quality. Machine learning models should be tested and checked to make ensure outputs and suggestions are aligned with business needs and expectations. Stock level analysis can identify when products are decline in popularity and are reaching the end of their life in retail market place.*

Keywords – Responsive, automatic demand prediction, dynamic representation, clear prediction results, mobility, web application.

1. INTRODUCTION

Demand forecasting or demand predication is the most important factor in a company to set goals. This demand factor also reduces the loss of the company. Hence, most of the companies recommend automatic demand prediction for their product.

2. OBJECTIVE OF THE PROJECT

The goal of our project is to create a web based system to predict the demand automatically using previously fed data.

1. The user interface of this system should be efficient, user friendly and maintain privacy.

2. This system can be used to predict the sales value and manufacturing value.

3. This system should represent the data in various formats such as graphs and graphs.

3. EVALUATION

Existing Model

Most of the companies are doing a lot of paper work to predict the future marketing and sales value of their company. This process makes those companies to achieve their objectives and setup some goals for their future enhancements. So, predicting the future value for a company is important for setting goals of a company. This process requires a lot of time and manual work to predict these values for many kinds of products in those companies. This also creates some problems too.

Drawbacks

The existing requires more time to get the results. It also requires a lot of man power.

4. IMPLEMENTATION

Proposal System

In order to remove the problems in the existing system, a automated prediction system called Logistic Network Superintendence Based On Knowledge Engineering has been created. These systems obtain the input data set from various companies and predict the future data for those companies. The company or the employee can give any kind of raw data to this system. The raw data can be converted into a formatted data in this system. Then, it predicts the data with some machine learning algorithms. The machine in this system has been already trained. So, the companies get the predicted data with a great accuracy.

This system also represents the predicted data in various forms such as tables, graphs and charts. This makes the user to have the data with better understandability.

Features

- User friendly GUI
- Accurate demand prediction
- Representation in various formats.
- Clear prediction value

- Secure to use

Data Collection

Initially, the administrator creates the workspace for the employee. The administrator also have a privilege to insert the input dataset. Then, the employee enters into his workspace and feed the data into the system, with the help data that provided by the company. The given input data can be any kind of raw data. This data is involved in the process of pre-processing. The pre-processing of data involves sorting, arranging and moving the data without changing the data. Sorting and filtering the data is also involved in the process of pre-processing. This process allows the user to analyse the data easily and quickly. After the process of pre-processing, the input dataset is compared with the production data of previous year. This is used to analyse the demand of the product on basis of demand. The comparison of data gives the values for rate of change. This rate of change is represented in the form of graph in the administrator and employee workspace. This system integrates with supplier and manufacturer systems to automatically collect and process data. This should be checked and audited periodically to ensure quality the predicted data.

Data prediction

The collected dataset is passed to the machine learning algorithm. This generates a machine learning models. These models are used to make a machine to be trained with the given dataset. After this process, the machine is fully trained. Then, the original dataset which is collected from the companies is given. Then, the machine starts predicting the given dataset. Then, the final predicted data is stored in the cloud and retrieved. This retrieved data is passed to an API which is responsible for representing the data in various formats.

Data Verification

This predicted data should be tested and checked to make sure outputs and suggestions are aligned with business needs and expectations. Stock level analysis can identify when products are declining in popularity and are reaching the end of their life in retail market place. Price analysis can be compared to costs and retail profit margins to establish the best combination of pricing and customer demand. Retailers can link sales and promotional activities to demand and supply planning so that stores do not run out of stock. Retailers can lower storage costs due to not having to hold as much stock. Analysis of commodity prices can optimize harvesting for food manufactures. Manufactures can increase speed to market by optimizing contracts and reducing turnaround times with upstream organizations.

Output

The predicted data is represented in various forms in administrator and employee workspace. The predicted sales value, the performance data and manufacturing value is represented in the form of graphs and charts. The rate of change is also obtained by using the predicted values. The branch data is updated according to the predicted values.
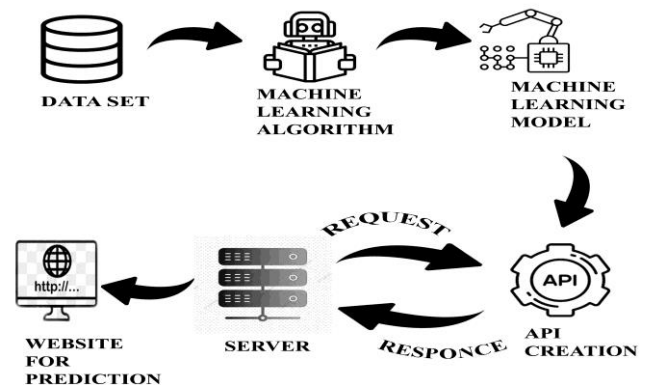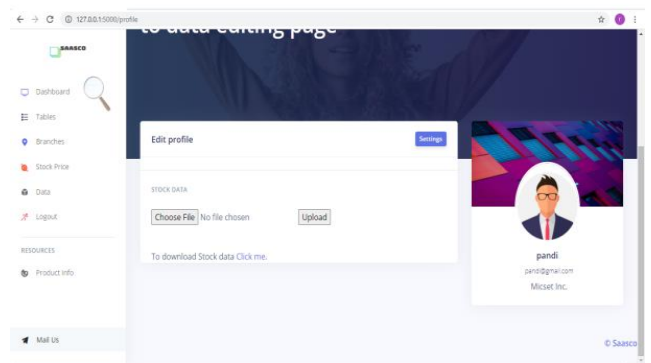

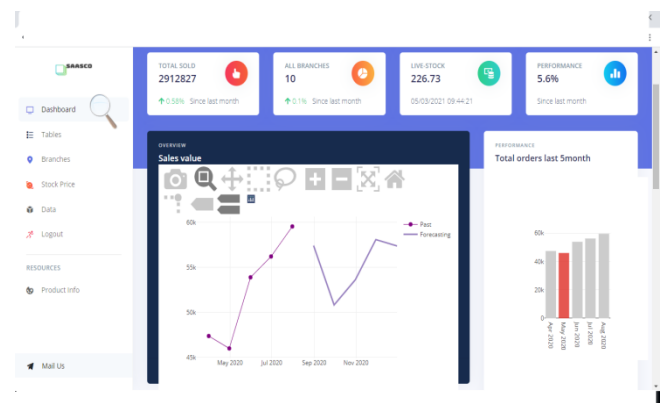**Fig 1.System Architecture**

Fig 2.Dataset insertion

Fig 3. Showing the Prediction Results

The above figure (Fig 2.) shows the home page of this system and the employee can give the input data as shown in the fig 3.
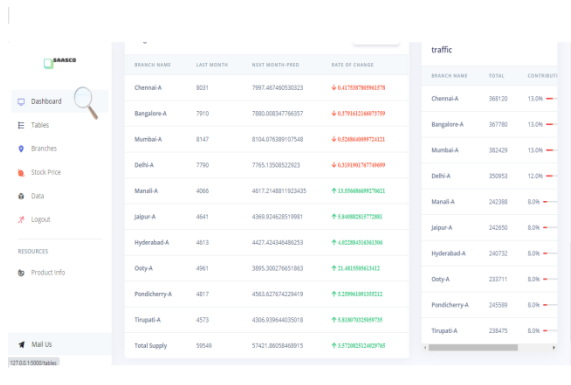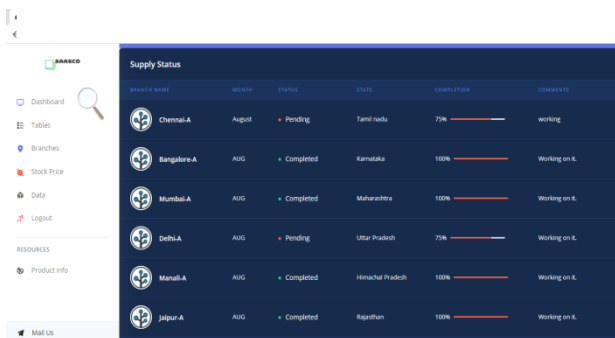

Fig 4.Showing the rate of change

Fig 5. Supply Status

The prediction results is shown in the fig 4.The rate of change and supply status is shown in the fig 5. and fig 6.The branches and the historical data is shown in the fig 7 and fig 8.
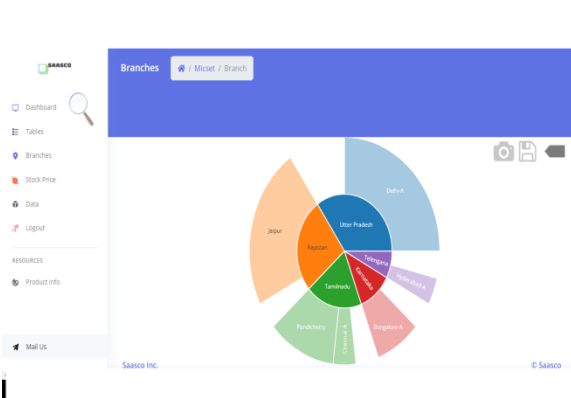

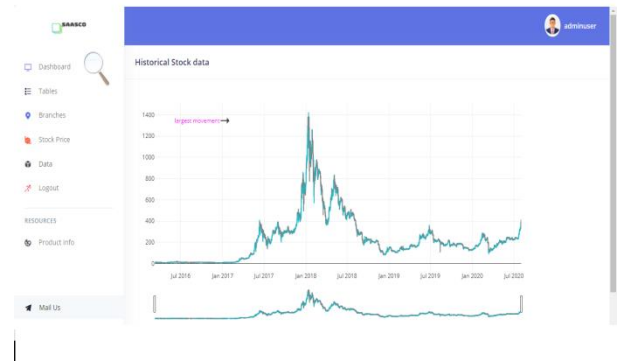
Fig 6.Showing the branches page

Fig 7. Showing Historical data

5. CONCLUSION

This system has presented the demand prediction done by the marketing companies. The web page can upload the data and view the sold products. The managers and employees to predicted easily the marketing companies. This system has separate workspace for managers and employees. The admin can update the selling products and status reached to the area. The employees can update the last year, month sold products. This project allows to the all marketing managers in the companies. This project is very easy to predict to the marketing companies and the store.

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