



PARSHVANATH CHARITABLE TRUST'S

A. P. SHAH INSTITUTE OF TECHNOLOGY

Department of Information Technology

(NBA Accredited)



Amazon Sales Prediction and Sentiment Analysis

Neha Chaudhary-20104134

Ashmina Dangat-20104052

Sakshi Gunjal-20104106

Project Guide
Ms. Manjusha

Contents

- **Introduction**
- **Objectives**
- **Scope**
- **Literature Survey**
- **Proposed System**
- **Project Outcomes**
- **Block Diagram**
- **Use Case/DFD**
- **Technology Stack**
- **Suggestion in review-1**
- **Result**

1. Introduction

- Amazon sales prediction and sentiment analysis project aims to develop a system that provides actionable insights for Amazon to improve their sales and customer satisfaction.
- Problem Identified :
 - Business vendors often fail to predict sales for particular products.
 - Brands can face difficulties in finding subjective sentiments and properly analyzing them for their intended tone.
- Solution Proposed :
 - A user-friendly website to predict sales based on historic data.
 - Obtain sentimental analysis based on the customer reviews considering positive, negative and neutral sentiments.

2. Objectives

1. To establish a future view of the upcoming market trends.
2. To Understand customer opinions about its products and services.
3. To make sure about the availability according to the sentimental analysis
4. To provide security to users regarding their information shared.

3. Scope

1. Widely applied in business domains.
2. Useful for various small businesses to associate with Amazon.
3. Analyzing historical sales data for Amazon products or services to identify trends and patterns.
4. Identifying areas where improvements could be made to increase customer satisfaction and loyalty.
5. Identifying trends in customer sentiment over time.

4. Literature Survey

Sr.no	Title	Author(s)	Year	Algorithms	Limitations	Result
1	Sentimental Analysis of Ecommerce Website	Lalit Zope Rushikesh Yadav, Nikita Yadav, Ashish Pandav, Prof. Dhanashri Bhopatrao	April 2021	Natural Language processing, Naïve Bayes	No statistical analysis of sentiments of reviews.	Thus, we decided to select NLP i.e. Natural Language processing for sentiment analysis as it helps in knowing the sentiments of each review.
2	Sales Prediction Analysis	Naveen Kumar, Jegan J, Yogesh V, Kavita S	May 2021	Xgboost, Linear Regression Gradient Boosting	No proper interface to provide input and receive prediction.	Create a proper GUI for user to input values for sales prediction.
3	Prediction and Forecasting of Sales Using Machine Learning Approach	DontiReddy Sai Rakesh Reddy	Sept 2021	Random Forest, Design tree	No interface for sales prediction. Number of categories were limited.	Enhancing the scope of project by adding various categories. We selected <u>Random forest</u> regression and Linear regression to predict the sales.

5. Proposed System

1. Feature 1: Sales Analysis

- Analyzing historical sales data for Amazon products or services to identify trends and patterns, including seasonality, trends, and cycles.

2. Feature 2: Sentiment Analysis

- User can understand the response of the customers on a particular product on basis of positive, negative, or neutral response

3. Feature 3: Visualization and Reporting

- Presenting the results of the analysis in a visual format, such as graphs or charts, to make it easier for decision-making.

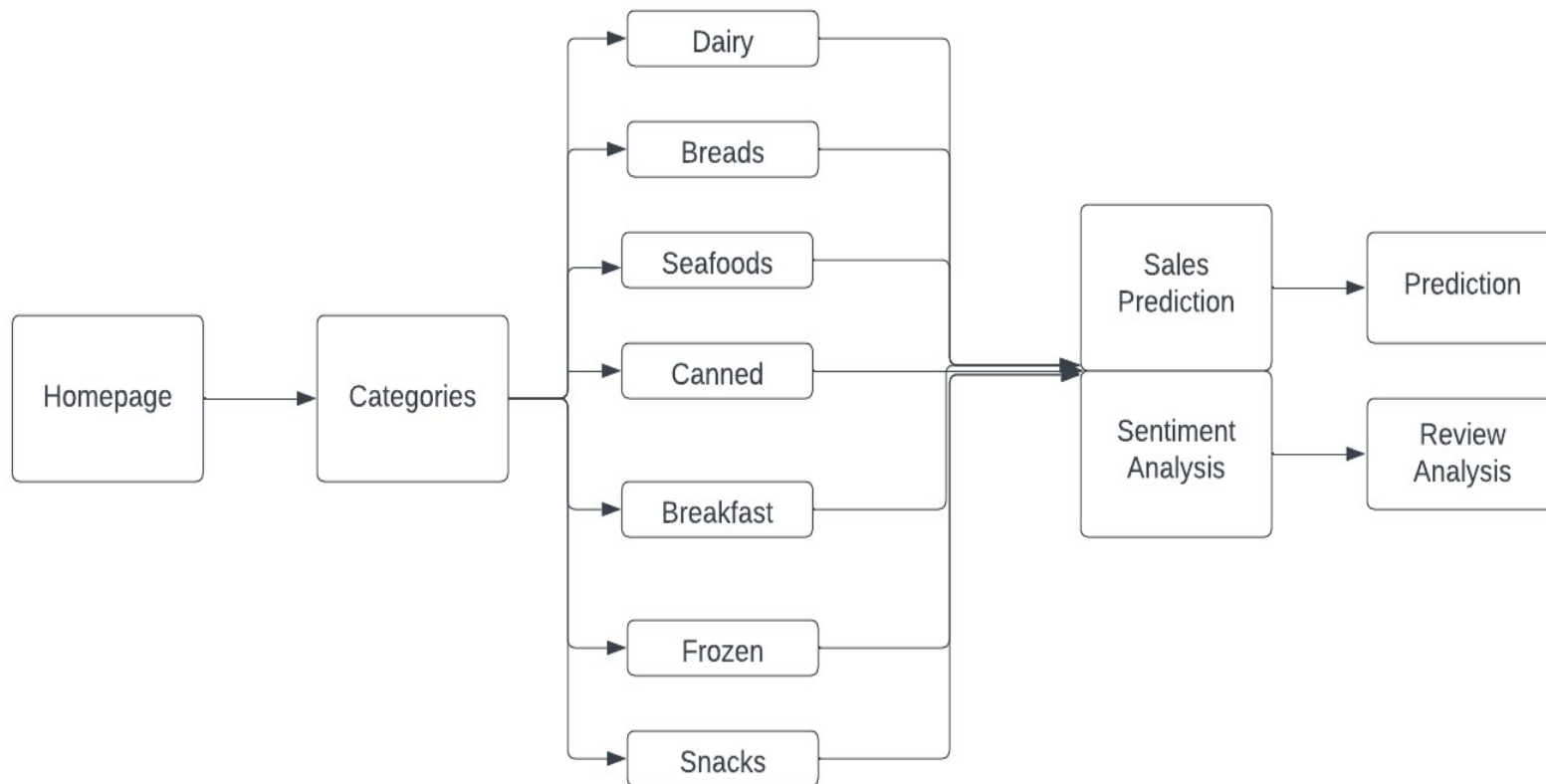
6. Algorithm Used

1. Sentimental Analysis : NLP (Natural Language Processing)
2. Sales Prediction : Random Forest Regression

7. Outcome of Project

1. User can predict sales based on past history.
2. Optimized pricing strategies for profitability and competitiveness
3. Improved customer sentiment analysis to address customer concerns proactively.
4. Enhanced product/service analysis to improve customer satisfaction and profitability.

8. Block Diagram



10. Technology Stack

1. - HTML, CSS, JavaScript
2. - Python
3. - MySQL
4. -Jupyter Notebook

11. Suggestion in review-1


- Algorithm understanding
- Algorithm implementation
- Improving interface

12. Result




Amazon Fresh

Dairy Products




Next →

Breads



Next →

Sea Food




Next →

DAIRY PRODUCTS

Paneer

Amul company



Price :Rs. 86

Item Weight : 200 g

Item fat content : High

Item Type : Dairy Products

Location : Gujrat

Sales Prediction

Sentimental Analysis

Amazon Sales Prediction

Enter Item Weight :

Enter Fat Content :

Enter Item Visibility :

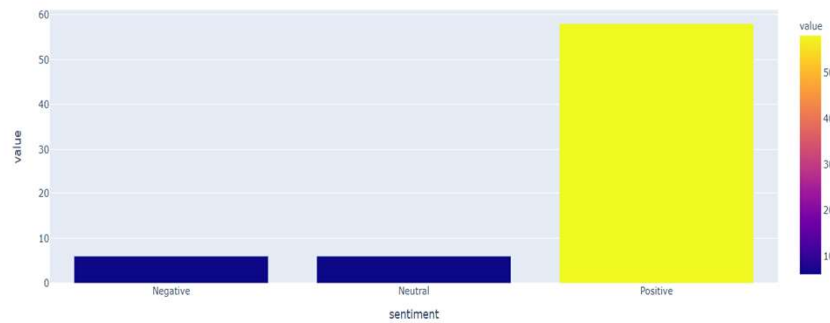
Enter Item Type

Enter Item MRP :

Outlet Establishment Year (YYYY) :

Amazon Sentimental Analysis

Bar representation based on sentiments of reviews



Bar representation based on star ratings of reviews.

Chat

Thank You...!!