FARM-EASY

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Abstract - *As we all aware, e-commerce is a developing industry in today's digital world, and we are all acquainted and familiar with this technology. There are no borders in this industry; from the urban to the rural, everyone uses the internet for buying and selling activities in all facets of their existence.Food is one of the most important needs of people at large, which is Farmers have fulfilled their obligations. Farmers are currently failing. to induce a correct price for or their products thanks to vendors who violate market policies, set prices consistent with their will and back huge profits. So, now we are bringing new and unique thoughts into action that's an e-Commerce website for farmers. We try to try to a little help for farmers through this website. This is frequently a website for farmers to help them with their own agriculture by supplying a simple internet platform utilizing the most recent technology.This web application will help farmers in comparing the current market rate of various products. this may help the farmers to use the current technology to seek discover profitable income streams Furthermore, it decreases the farmers' additional expenditures like as transportation and labour. Because we provide a centralized platform, farmers may save time searching for their chosen seeds on the market. This interface makes things simpler for the farmer to create the necessary procedures. An online application is being developed to help farmers from various backgrounds with multiple language support and stock price prediction. The proposed web application is meant to use Naïve Bayes Algorithm to predict.*

***Key Words*: Agriculture, Crop Prediction, Farmers**

1. INTRODUCTION

FARM-EASY is considering a move to create and provide an online platform from which to collect the information about the nearby vendors virtually where the vendors store their information and updates it on weekly basis. Farmers get all those vendors information and it helps them to sell their stock for highest price. In this web application both vendors and farmers register themselves in their respective portals and later are directed to their home pages. In the Vendor's page, the vendor can add stock prices according to this need, edit these prices on daily and weekly basis. The Crops are displayed in the farmer's portal where the farmer can choose a satisfying crop to grow.

2. RELATED WORK

Gomathy C.K, Jaswanth Reddy Vulchi, Venkatesh Pathipati [1] proposed As we all know that e-commerce is a new field in the digital world, and we are all familiar with it. In this technology, there are no borders; people from all walks of life, from urban to rural, use online buying and selling activities in many facets of their lives. One of humankind's most basic requirements is food. Farmers satisfy the needs of living beings. Farmers are currently unable to receive a fair price for their products. As a result, we are now putting a new and distinctive idea into action, which is an ecommerce website for farmers. This website will assist farmers. This website is designed to make farming easier. In agriculture by providing a user-friendly online platform based on cutting-edge technology. Farmers will benefit from this since they will be able to make better use of their current resources.to use technology to discover the most profitable sources of income Additionally, it lowers additional costs such as transportation.as well as labour to the farmers The farmer might save time by searching for their selected seeds in advance. It will change the market by delivering a single, simple platform.

Sumitha Thankachan, Dr. S. Kirubakaran [2] proposedTechnological advancements have aided decision-making in a variety of industries, including agriculture. Agriculture growth has been stymied for several years as a result of a lack of agricultural skills and ecological factors. The main purpose of this post is to connect out to farmers to inquire about their knowledge, use, and perceptions of e-agriculture. Farmers' awareness of e Commerce was collected using a statistical survey design technique in this study. The results showed that there is a low level of knowledge hence it shows that there is a need for e-agriculture to help them. e-Agriculture is a platform for supporting marketing of agricultural products.

Ujang Maman , Yuni Sugiarti. [3] Since the agricultural sector appears to be more resistant to economic crises than other sectors, it plays an essential role in the national economic framework. Furthermore, the agriculture sector plays an important role in meeting the population's fundamental necessities and increasing farmer's income, industrial raw materials, and business development as well Opportunities for jobs, as well as improvements to national food security Agricultural productivity, has increased, yet it

still falls short of expectations. This study's purpose is to create an agribusiness e-commerce system for agricultural production. It is advantageous to present and market farmer's products as to improve the farmer's livelihood. This case study gathered information from observation, in-depth interviews, and a review of the literature It was a complicated system. Rapid Application Development (RAD) was used to create the system, which is object-oriented and uses Uml Diagrams Language tools (UML). The creation of a typical example to aid in the marketing of rice goods, as well as product data management, customer data management, and order management.

Ranjani Dhanapal, A AjanRaj, S Balavinayagapragathish, J Balaji [4] proposed Agriculture is the backbone of economic system of a given country. Farmers are the most significant players in agriculture. Farmers lose a lot of money when the price drops following harvest Agricultural commodity price fluctuations affect a country's GDP. Crop price estimates and analyses are performed in order to make an educated decision before sowing a certain crop. Anticipating crop prices can help you make better decisions, which will help you save money and handle price fluctuations. We projected the price with several crops in this research by examining prior precipitation and WPI data.

Fajar Delli Wihartiko, Sri Nurdiati, Agus Buono, Edi Santosa -[5] proposed predicting the impact of changes in agricultural product prices is referred to as agricultural product price prediction. The prices of various agricultural products have been predicted using a variety of methodologies. The goal of this research is to look at several strategies for predicting agricultural commodity prices in the literature and to identify future research problems. The text mining method is used to get a high-level study summary based on the presence of terms in an article According to the findings, the most often employed approaches for predicting agricultural commodity prices are Machine Intelligence (30%), Data Mining (22%), and Regression (22%). (18 percent). This study's contribution contains the most recent research findings, advice for the best methodologies, and research proposals for the future, all of which take into account the present pandemic situation.

Kiran M. Sabu, T. K. Manoj Kumar [6] Price changes in agricultural commodities have a negative impact on a country's GDP. Farmers are hurt emotionally and financially as a result of their years of hard work being for naught. Price forecasting could aid the agriculture supply chain in making critical decisions to reduce and manage the risk of price changes. Predictive analytics is supposed to tackle the difficulties of the common man as a result of reduced agricultural production due to unstable climatic conditions, global warming, and other factors. Arecanuts are a popular crop in India, with Kerala leading the way in terms of output. Farmers in Kerala have been migrating away from arecanut production in recent years due to pricing swings and climate change. The monthly prices of In this study, arecanuts in Kerala are projected using time series and machine learning methods. The RMSE value was used to evaluate the performance of the models SARIMA, Holt-Seasonal Winter's method, and LSTM neural network on the arecanut dataset with prices from 2007 to 2017. The LSTM neural network model was determined to have the best match for the data.

Girish K. Jha, Kanchan Sinha [7] proposed Food price forecasts are intended to aid farmers, policymakers, and the agribusiness industry. Food security management in emerging nations dominated by agriculture, such as India requires more than ever effective and trustworthy food price forecasting models in this era of globalization. In emerging economies, however, data availability is often sparse and lags, necessitating dependence on time series forecasting models. Given the availability of data in developing nations, a recent improvement in A feasible price predicting strategy is provided by the Artificial Neural Network (ANN) modelling approach. Using month - to - month wholesale soybean and rapeseed-mustard pricing data, the advantage of ANN over linear model methods was established in this study. In comparison to linear models, empirical investigation has shown that ANN models can capture a substantial number of directions of monthly price variation. When the data exhibits a nonlinear pattern, it has also been discovered that combining linear and nonlinear models produces more accurate forecasts than using these models separately. By combining linear and nonlinear forecasting approaches, the current study intended to construct a user-friendly ANN-based decision assistance system.

Hiroki Uematsu and Ashok K. Mishra [8] proposed Direct marketing strategies are quickly becoming recognised as a valid business choice in the United States because they allow organisations to acquire a lower price by selling directly to customers. This study has two objectives. We first calculated the number of people using a country wide survey. a zero-inflated negative binomial model to find factors that influence the total number of direct contacts Farmers have developed marketing methods.We then designed a regression model to examine the impact of the intensity of direct marketing strategy adoption on gross cash farm income. income. The data show that the intensity of adoption has minimal effect on gross cash flow. Farm revenue and farmers market participation are both negatively related to gross cash flow. Farm revenue was assessed at each of the five quantiles.

3. METHODOLOGY

Farm-easy is a user's friendly web app in which users can register themselves in order to use the facility. The front-end and the back end of the website will be designed using PHP The system will have two portals:

1) **Vendors**: In this, the vendors have to register themselves by providing their personal information which is stored as real time data in mysql using PHP and update the stock prices as per their requirements. If they are providing the transportation facility, then they have to specify in their buy so that it will help the farmers in transporting their stocks. They have to update the prices on weekly basis or according to the occasions. The details entered by vendors are directly reflected in the farmer's homepage.

2) **Farmers**: In this, Farmers have to register by providing their personal information. These data will be stored as real time data in a database using PHP. After registering they can see the stock prices by different vendors in a sorted manner, the prices are displayed that it will help farmers to take the correct decisions. Farmers are also provided with a feature that predicts stock prices on different occasions which helps farmers to plan and manage their produce. This web application is intended to use Naïve Bayes Algorithm for crop prediction.. The assumptions are independent and unrelated to other features which we use for price prediction. The stock prediction is based on the various parameters which are provided The vendor's details are hidden from each other. The system will help the farmers in finding easy ways to sell their agricultural products and it's also profitable for them. It will save their time as well and motivates to increase their production and will remarkably affect the Indians.

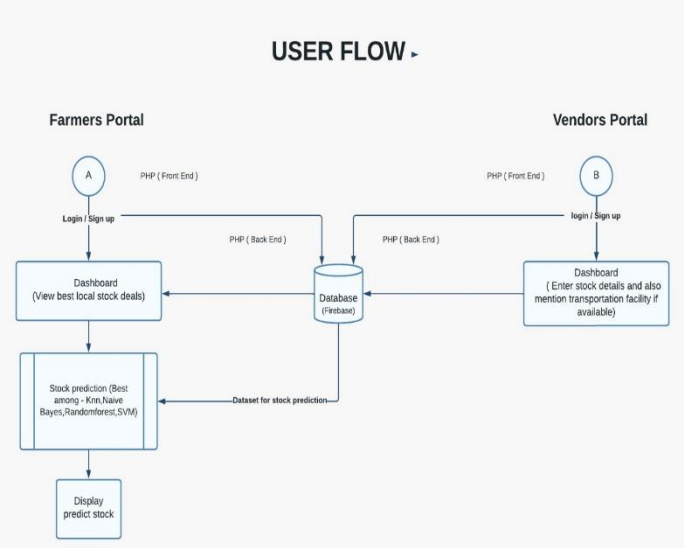

Fig -1: User Flow

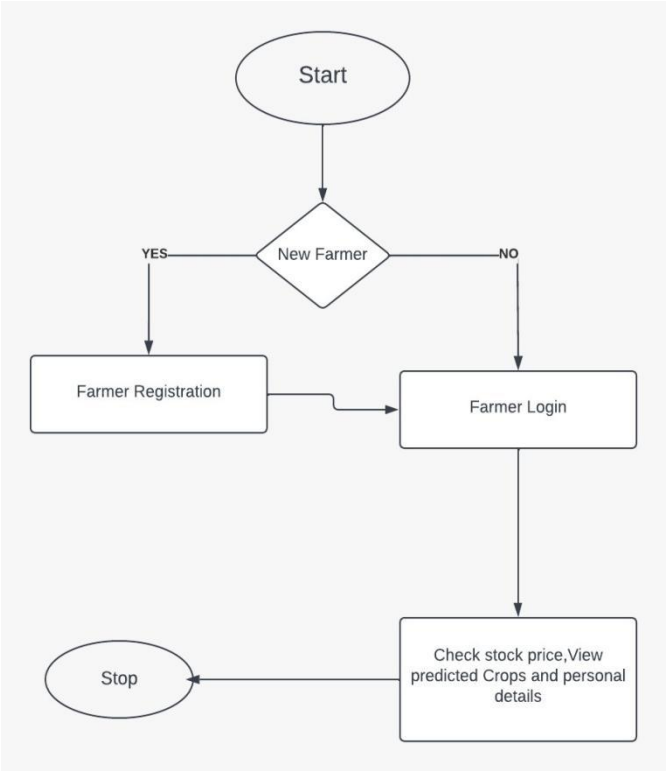

Fig -2: Farmers Flow Chart

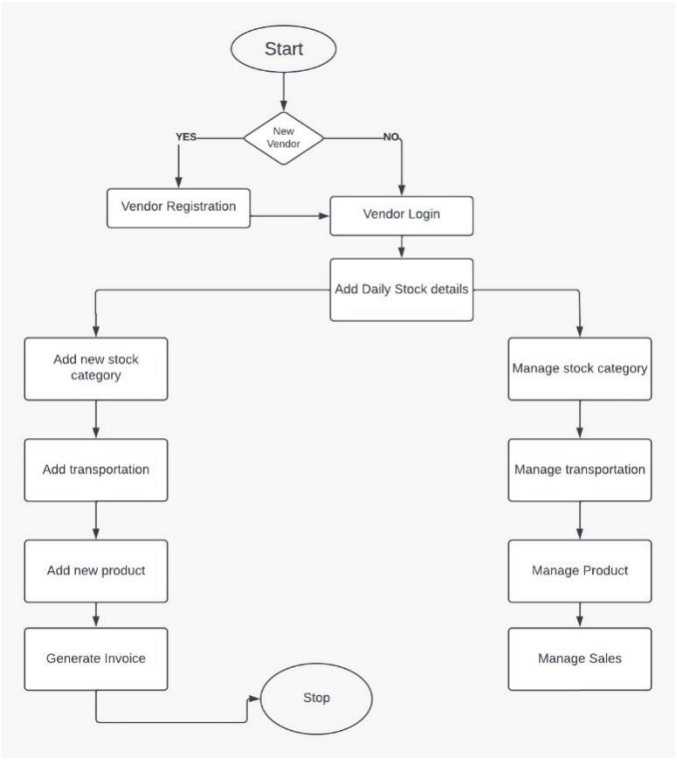

Fig -3: Vendors Flow Chart

4. RESULTS

This system enables farmers to pick great deals for their produce by allowing farmers to directly view different prices of the agricultural produce and so also make them identify the contact to the vendors thereby removing the middle man in order to save time and acquire the best price for their produce. The screening of vendors helps the stock prices to remain hidden and prevent price clashes. The system allows the farmers to view predicted crops that will allow farmers to plan their produce according to the market needs and trends which prevents farmers from stock scams as the system holds standard prices to be followed by vendors.

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