Project Title:

Digital Agriculture Recommendation System

Problem Statement:

Agriculture plays a very important role in the economy of a country. It is primarily managed by farmers, who are responsible for growing crops and sustaining agricultural production. As farmers are the most important stakeholders in agriculture production, they must have proper knowledge about the production and consumption trends of agricultural products in order to make effective and informed decisions.

Conventionally, farmers grow crops on the basis of previous years' records, keeping in mind which crops were in the highest demand and were more expensive during the last season. This practice often leads to a recurring problem where almost all farmers think in the same way and grow the most demanded crops again. As a result, the productivity of those crops increases excessively, while the productivity of other crops decreases. This imbalance creates serious issues such as overproduction, reduced market prices, wastage of resources, and financial losses for farmers.

In the past, many agriculture-related systems have been developed and made available online. However, most of these systems mainly focus on buying and selling agricultural products, recording and storing farm data, monitoring and analyzing farm activities, tracking consumption patterns, managing business expenses, and maintaining farm budgets. To the best of our knowledge, there is no comprehensive web-based system that provides intelligent recommendation functionalities for farmers.

Therefore, we propose to develop a **web-based Agriculture Recommendation System** based on **spatio-temporal context**, where farmers will receive recommendations such as what crops they should grow, what the expected demand of a particular crop will be in the next season, what treatments should be applied for specific crop diseases, and which type of soil is suitable for different kinds of crops. At the end, the final product will be an **end-to-end web-based agriculture recommendation system** that will be based on **rule-based inferencing** techniques. The proposed system will make life easier for farmers by enabling them to take better, faster, and more informed decisions regarding agriculture.