SmartPredi - Development of Agricultural Crop Wastage Reduction System using Machine Learning

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Abstract

The culture and economy of Sri Lanka heavily depend on agriculture. The All-Island Farmers Federation (AIFF) claims that post-harvest produce loss is a problem that has plagued farmers in all regions of Sri Lanka and occurs both on farms and in commercial locations. The lack of a suitable system to handle produce, such as fruits and vegetables, has been identified as the key problem. The process of sowing seeds to generating the harvest and transporting it to the consumers is an overly complex process. If this process is not correctly identified the demand and supply may not be at equilibrium. Farmers tend to take decisions based on their experiences or from the knowledge gathered from past generations. Over the year environmental factors as well as economic factors have changed, therefore there is a high chance that the decisions taken by farmers might lead to wastage of crops. This research hopes to develop a mobile application for the farmers by considering some factors that affect the wastage in crops and try to provide timely relevant information to minimize the crop wastage by deploying machine learning, one of the advanced technologies in crop prediction.

Keywords

Mobile Application, Neural Networks, Simple Learning, Support Vector, Linear Programming, Machine Learning, Prediction