FarmCare: Location-based Profitable Crop Recommendation System with Disease Identification

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Abstract

Sri Lanka is an agricultural country since ancient times. Today's agriculture field is in a dangerous situation because farmers are losing their yield. There are many factors to consider when planting crops like rainfall, temperature, soil conditions, future prices, diseases, etc. We decided to help them through the android application we are making. Here we identified four main problems. The first one is the wrong crop cultivation. This is the main reason crops and cultivation are destroyed. To give a solution to that problem, we suggest the five most suitable crops to cultivate according to their location. The second problem is the lack of knowledge about future market prices. As a solution to that problem, we predict prices for each crop for the next 12 months. Another problem is the inability to sell their product at a reasonable price. Here, we directly connect buyers and sellers by removing intermediaries. The last problem is the difficulty to identify crops affected by diseases . Using our mobile app farmers can understand which disease affected their crops by uploading an image to the app. To give solutions to the above- mentioned problems machine learning(ML) algorithms such as random forest(RF), k-means clustering, and CNN are used

Keywords

Machine Learning, Price Prediction, Disease Identification, Random Forest Algorithm, K-Means Algorithm, CNN, Android Application