

Abstract

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Proposed framework for implementing data mining techniques to enhance decisions in agriculture sector Applied case on Food Security Information Center Ministry of Agriculture, Egypt

Egypt is facing a problem of food insecurity combined with poverty especially in rural Upper Egypt. Food availability is one of the main pillars of food security including production and importation. Information about food availability is collected from different sources but prediction of the needed amounts of the main strategic crops for the upcoming years is not automatically calculated. This paper aims to predict the needed amount of crops to satisfy the Egyptian citizens' needs for the upcoming years by building process of Artificial Neural Networks (ANNs) via WEKA using Multilayer Perceptron (MLP) function as a data mining predictive technique. Results showed that using this data mining framework succeeded to predict the annual needed amounts of the main strategic crops (Wheat, Rice and Beans) up to the year 2020. The obtained results could help decision makers for achieving food security and the country's productivity for the upcoming years continuously.