Automated Modular Data Analysis and Visualization System with Predictive Analytics Using Machine Learning for Agriculture field

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Abstract- **Economy of an India is majorly depending on growth of agricultural yields, and its allied agro industry products. Prediction of agricultural yield growth is a most difficult for the agriculture departments across globe. The agricultural yields growth is depending on several factors. In this paper historical data is analyzed and a predictive model was designed. Several Regression models such as linear model, multiple linear model and nonlinear models were tested for an effective prediction, or for forecasting the agricultural yield for a variety of crops. Along with this the crop trade for local farmers is a very complicated and tedious task and can get easily mislead by the system we are proposing helps them to analyze the crop availability and also according to market prices can be able to predict various characteristics of the trade. The proposed method is capable of producing the visual representation after data analysis and provides the prediction results in a visual format. And also the unstructured data analysis is implemented in the system. In the proposed method, the pre-processed input data will be sent to perform a descriptive analysis and a predictive analysis. In the descriptive analysis, the data is analyzed and the summary of the analysis is given as the output.In Predictive analysis, there are steps to be considered for the analysis. At the end summary of predicted results are given as output and summary of both descriptive analysis and predictive analysis is given as final report in visual format.**

Keywords—Agriculture; Machine Learning; Agriculture Industry; Prediction Models; Descriptive Analysis; Predictive analysis.