

# Prediction of Crop Yield using Machine Learning



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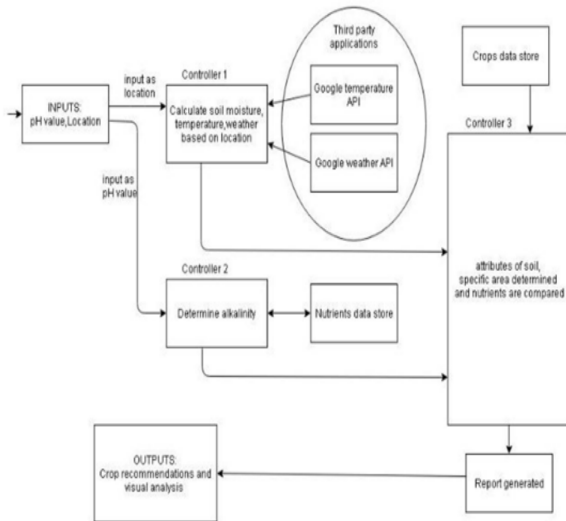
- ▶ Sometimes farmers are not aware about the crop which suits their soil quality, soil nutrients and soil composition.
- ▶ The work proposes to help farmers check the soil quality depending on the analysis done based on data mining approach.
- ▶ Thus the system focuses on checking the soil quality to predict the crop suitable for cultivation according to their soil type and maximize the crop yield with recommending appropriate fertilizer.



- ▶ The existing systems are hardware based.
- ▶ It is difficult to maintain and they are expensive.
- ▶ Also they lack to give accurate results

# Crop Yield prediction

## Proposed System





- ▶ Being a totally software solution, it does not allow maintenance factor to be considered much. Also the accuracy level would be high as compared to hardware based solutions, because components like soil composition, soil type, pH value, weather conditions all come into picture during the prediction process.
- ▶ It uses Random Forest learning method to predict the yield
- ▶ Random forest method has only 6% to 14% error rate where multiple linear regression has an error rate of 14% to 49%.



- ▶ The system aims to help farmers to cultivate proper crop for better yield production. To be precise and accurate in predicting crops, the project analyze the nutrients present in the soil and the crop productivity based on location.
- ▶ The proposed system will check soil quality and predict the cop yield accordingly along with it provide fertilizer recommendation if needed depending upon the quality of soil.

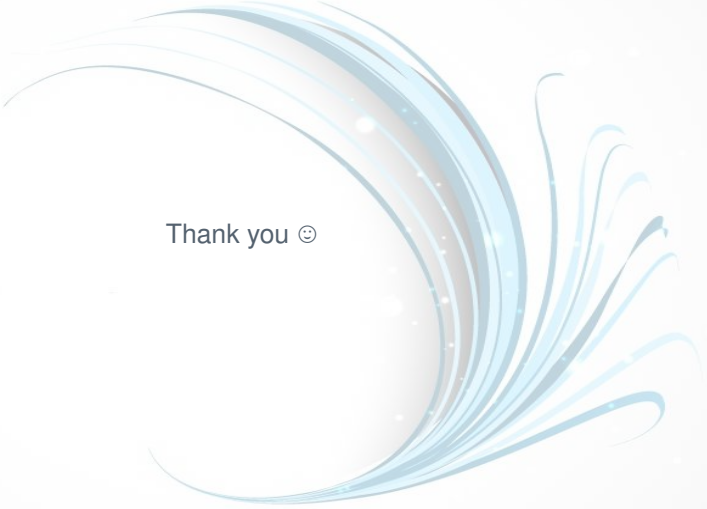


- ▶ Prediction of Crop Yield using Machine Learning - aushika Ghadge 1, Juilee Kulkarni 2, Pooja More , Sachee Nene , Priya R L
- ▶ Random Forests for Global and Regional Crop Yield Predictions Jig Han Jeong , Jonathan P. Resop, Nathaniel D. Mueller David H. Fleisher, Kyungdahm Yun, Ethan E. Butler , Dennis J. Timlin, Kyo-Moon Shim, James S. Gerber , Vangimalla R. Reddy, Soo-Hyung Kim





- ▶ It will act as a medium to provide the farmers efficient information required to get high yield and thus maximize profits which in turn will reduce the suicide rates and lessen his difficulties.



Thank you ☺