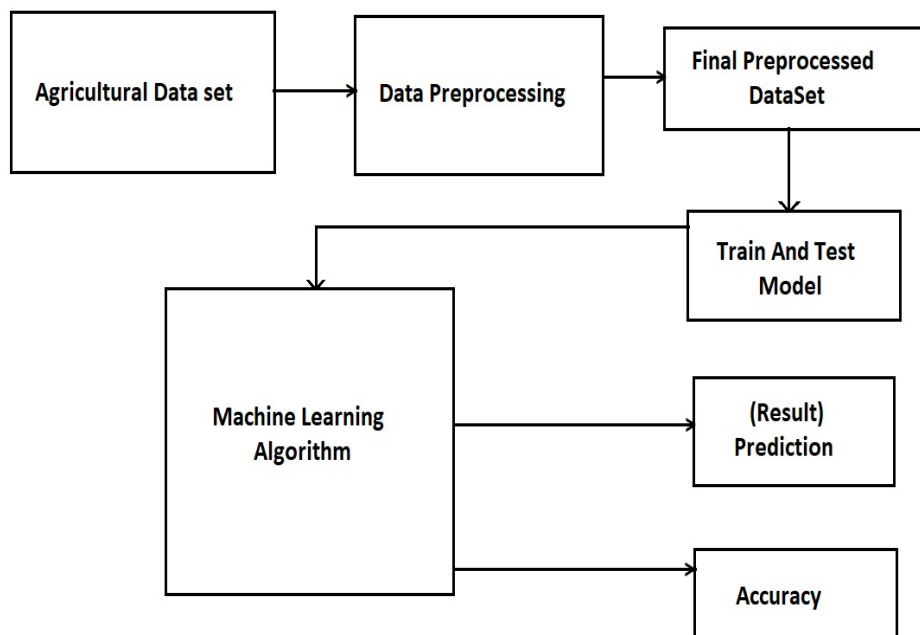


PROPOSED SOLUTION

NOVELTY:

- Our model is different from others because it is achieved more accurately by implementing the proposed algorithm compared to the existing Random Forest (RF) algorithm rather than the farmers have to determine the expected crop yield and required fertilizer by themselves.
- The accurate prediction of crop yield certainly benefits the farmers in choosing the right method to reduce the crop damage and gets best prices for their crops.
- The difference between the expected crop yields with respect to the actual crop yield and accurate, spatially unambiguous awareness and information about the yield gaps is necessary to achieve sustainable amplification of agricultural yields.
- The model is a data-driven and composed of prototypes selected from the actual data. Many factors affect the yield, and data clouds can be formed in the feature/data space based on the data density.
- In addition, the model can determine the most influential features of the yield prediction online.

BUSINESS MODEL:



SOCIAL IMPACT:

- With the help of data analysis for agriculture businesses, farmers can observe the impact that extreme weather conditions and other phenomena can have on their crops.
- Analyzing the yields of crop is necessary to update the policies to ensure food security.
- In both smart agricultural facilities and in fields, devices like sensors, drones, and smartphones capture data at specific locations. This enables businesses to carefully collect and consider high-resolution data on humidity, temperature, chemicals, and so on.

FEASABILITY:

- The energy efficiency and cost-effectiveness, the system can be used in water-deficient agricultural lands with less human intervention.
- It also provides easy accessibility of the sensed information.
- It is pre-harvest estimation which is commonly performed on a plot-by-plot basis, and both the enumerator and the farmer are in visual contact with the growing crop. The method is useful when it is used to predict crop production 15 days before harvesting.

SCALABILITY:

- We can observe that analysis has been done on agriculture productivity, hidden patterns discovery using dataset related to the season and crop yield data .so we can notice and made analysis about different crops cultivated.
- Due to improper knowledge regarding diseases, infections, climatic changes, soil quality, water level farmers loss some part of their crop yield. This model can be used for giving maximum crop yield.