Exploratory Analysis Of RainFall Data In India For Agriculture

PROBLEM STATEMENT:

India is an agricultural country and secondary agro based market will be steady with a good monsoon. The economic growth of each year depends on the amount of duration of monsoon rain, bad monsoon can lead to destruction of some crops, which may result in scarcity of some agricultural products which in turn can cause food inflation, insecurity and public unrest. In our analysis we are trying to understand the behavior of rainfall in India over the years, by months and different subdivisions.

This comparative study is conducted concentrating on the following aspects: modeling inputs, Visualizing the data, modeling methods, and pre-processing techniques. The results provide a comparison of various evaluation metrics of these machine learning techniques and their reliability to predict rainfall by analyzing the weather data.We will be using classification algorithms such as Decision tree, Random forest, KNN, and xgboost. We will train and test the data with these algorithms. From this best model is selected.

Who does the problem affect?	Direction of moisture laden winds.
What are the boundaries of the problem?	Weather conditions have been changing for time being so it may lead to the destruction of crops, heavy floods that can cause harm to human life.
What is the issue?	Sharing the wrong data is major problem in rainfall analysis.
When does the issue occur?	When the drops are heavy enough, they fall to the Earth. If a cloud is colder, like it would be at higher altitudes, the water droplets may freeze to form ice.

Where does the issue occur?	The issue occurs among the incorrect collection of data it does not help improve furcating.
Why is it important that we fix the problem?	protection of life and property, public health and safety, and support of economic prosperity and quality of life.
What solution to solve the issue?	The machine learning algorithm is used for predicting rainfall data using important atmospheric features by describing the relationship between atmospheric variables that affect the rainfall.
What methodology use to solve this issue?	Machine Learning algorithm are used to predict the rainfall with the help of historical data’s .