Title: **Exploratory Analysis Of RainFall Data In India For Agriculture**

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## PROBLEM STATEMENT:

Weather conditions changes then and often. This can lead to Severe threats to all the living beings including human beings. So predicting weather, especially Irregular heavy rainfall can cause huge floods and economic losses. This also decreases crop productivity and may lead into Food shortage. Predicting the Rainfall plays a vital role in our life time. Farmers will get benefit due to this and Our country's GDP will rise. Collection of previous 10 years data may give us an idea about the pattern of Rainfall. Using all these Datas, Appropriate farming activities can be performed. Water is the vital mineral for a life. So, these datas can help us in predicting Rainfall during summer days to save water. Agriculture definitely requires gallons of waters.

## ABSTRACT:

We use APPLIED DATA SCIENCE to solve this problem. There are so many algorithms available such as Decision tree, Random Forest, KNN, Xgboost, etc. We will test and train the data with one of these algorithms. From these, the best algorithm is selected and the model is being developed. We visualize the datas and models. The results provides us various evaluation metrics of the Machine Learning techniques.

## LANGUAGES USED:

Python = 100% (Jupyter notebook)

## LITERATURE SURVEY:

| PROJECT TITLE | AUTHOR | OBJECTIVE/OUTCOME |
|---|---|---|
| Spatial analysis of Indian Summer monsoon Rainfall (Mar 26,2014) | Markand Oza C.M.Kishtawal | Understanding the variability in rainfall, analysis of Indian Summer monsoon rainfall using Spatial resolution. |
| Climate impacts on Indian Agriculture. (16 June,2004) | K.Krishna kumar K.Rupa Kumar R.G.Ashrit N.R.Deshpande J.W.Hansen | Presents about the analysis of Crop-climate relationships for India, using historical predictions. |
| Exploratory data Analysis of Indian Rainfall Data | Anusha Gajinkar | This Study shows that, India has two monsoon rainfall season one is north west monsoon and second one is south east monsoon. |