

## Ideation Phase

### List of Problem Statements

Date	19 September 2022
Team ID	PNT2022TMID12561
Project Name	Exploratory Analysis of RainFall Data in India for Agriculture

#### Abstract:

The ability to get rain is crucial for agriculture. India's economic development depends heavily on agriculture. Due to its enduring applications in crisis management, agriculture, and the measurement of pollutant concentrations, rainfall forecasting or prediction has gained research relevance. But because of the extreme fluctuation in climatic changes, it is now exceedingly difficult to anticipate the amount of rain that will fall. Therefore, a more accurate forecasting model based on classification models like SVM, XGBoost, KNN, and Decision Tree is required.

#### Customer Problem Statement:

After too much rain damaged the winter crops, farmers were faced with the arduous chore of harvesting their harvest and transporting the produce to markets. A new phase of intervention is anticipated to be introduced to the impacted sectors confronted with the adverse propensities of rainfall extremes by accurate and timely rainfall forecast.

In order to help farmers and to effectively use the water resources, it is necessary to have a programme that can predict rainfall more accurately. Heavy rainfall might have negative effects, such as crop damage or destruction.

I am	Farmers - whose primary line of work is farming, will be most impacted by the erratic rainfall.
I'm trying to	<ul style="list-style-type: none"><li>• Obtain accurate historical rainfall data for the desired region to use in forecasting.</li><li>• Accurately forecast rainfall for a specific period in a region..</li></ul>
But	The right predictions but with a delay of a specific number of hours may also result in a problem since the wrong prediction causes the action of choosing the wrong crops, which may result in significant loss and wastage.
Because	<ul style="list-style-type: none"><li>• Inaccurate rainfall data gathering could have an impact on forecast accuracy.</li><li>• A sudden change in the weather, such as a tornado, which can happen right away after the forecast is made.</li></ul>
Which makes me feel	There won't be complete honesty in the faith placed in the tool or product.
What solution to solve the issue	By explaining the relationship between those atmospheric variables that affect the rainfall, the machine learning algorithms can be utilized to predict rainfall data utilizing significant atmospheric features..