# PROJECT FLOW

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| TEAM ID | PNT2022TMID00722 |
| PROJECT NAME | Exploratory Analysis Of Rain Fall Data In India For Agriculture |

Rainfall has been a major concern these days. Weather conditions have been changing for time being. Rainfall forecasting is important otherwise, it may lead to many disasters. Irregular heavy rainfall may lead to the destruction of crops, heavy floods that can cause harm to human life. It is important to exactly determine the rainfall for effective use of water resources, crop productivity, and pre-planning of water structures.

This comparative study is conducted concentrating on the following aspects: modelling inputs, Visualizing the data, modelling 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 and saved in pkl format. Once the model is saved, we integrate it with flask application and also deploy the model in IBM.

To accomplish this, we have to complete all the activities and tasks listed below

## Data Collection

- Collect the dataset or Create the dataset

## Data Pre-processing

- Import the Libraries.
- Import the dataset.
- Checking for Null Values.
- Data Visualization.
- Taking care of Missing Data.
- Label encoding.
- One Hot Encoding.
- Feature Scaling.
- Splitting Data into Train and Test.

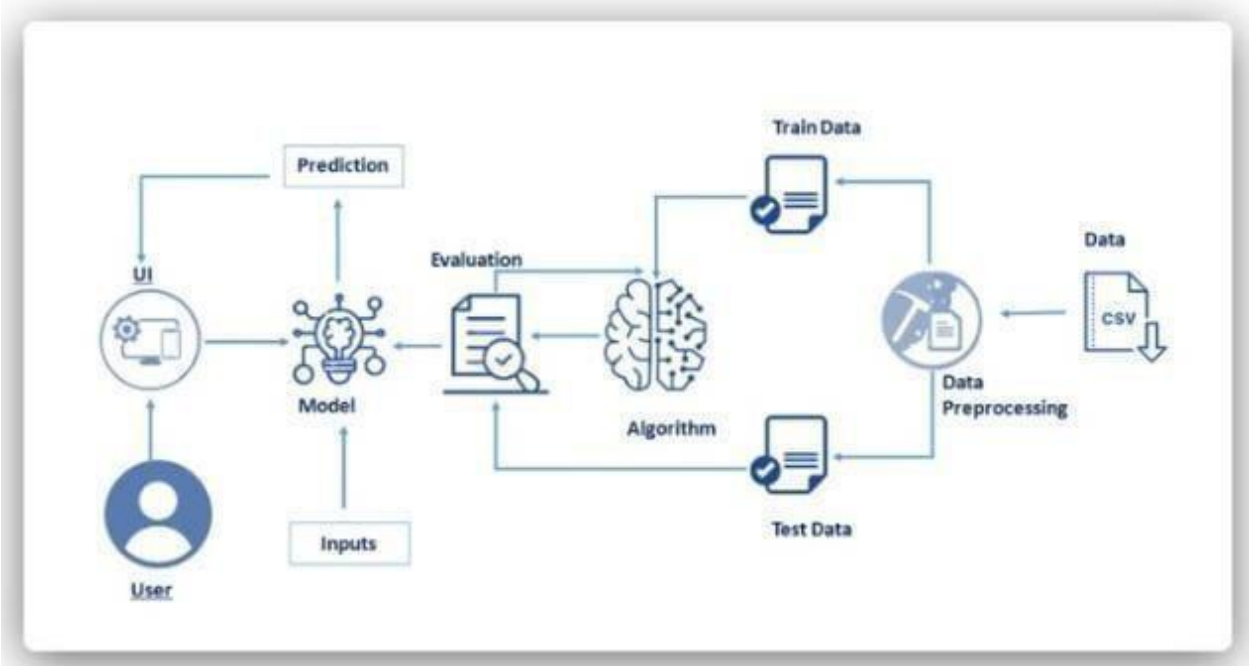
## Model Building

- Training and testing the model
- Evaluation of Model

## Application Building

- Create an HTML file
- Build a Python Code

## Diagram:




## Final Output:

- User interacts with the UI (User Interface) to enter the input values.
- Entered input values are analyzed by the model which isintegrated.
- Once the model analyses the input the prediction is showcased on the UI.