Exploratory Analysis of Rainfall Data in India for Agriculture

Team ID

PNT2022TMID10058

Faculty Mentor

Mr. RAJAGOPAL.T. K. P

Team Leader

SRIRAJA B (720719104157)

Team Members

SURESH RAJAN M (720719104160)

THAVAPRAKASH S (720719104167)

SURENDRA GUPTA (720719104153)

Abstract

Our Country population is currently increasing. As a result, crop production is rising daily as well as the demand for food. On the other hand, a number of factors, including changing climates and poor soil fertility, have an impact on crop productivity. Rainfall has become a major issue in recent years. Regularly heavy rain can destroy crops and cause deadly floods that can endanger human life. For efficient use of water resources, crop productivity, and advance planning of water structures, it is crucial to precisely forecast the rainfall. Most of the crops are solely dependent upon weather conditions. The objective of this purposed system is to modelling inputs, data visualization, modelling approaches, and pre-processing methods. The analyses compare various metrics for evaluating these machine learning techniques and their accuracy in predicting rainfall by analyzing weather data. The classification algorithms Decision tree, Random Forest, KNN, and xgboost will be used. With these algorithms, we will train and evaluate the data. The best model is chosen and saved in pkl format. Following model was saved, we as integrate it with the Flask application and deploy the model in IBM Cloud.