Department of Collegiate and Technical Education

Shivasharane Akkamahadevi Government Women's Polytechnic, Shiralakoppa

Department Of Computer Science And Engineering

Synopsis Report on

"Rainfall Prediction"

Submitted by

Name	Reg No
Priya C.K	**143CS21028**
Shruthana J	**143CS21040**

Under the Guidance Of

Mr. Umesha D.K **BE,M.Tech**

Lecturer, Dept of CS&E

BOARD OF TECHNICAL EXAMINATION

PALACE ROAD, BANGLORE-1, Karnataka-590018

June -2023

TABLE

ABSTRACT

India is an agricultural country and its economy is largely based upon crop productivity and rainfall. For analyzing the crop productivity, rainfall prediction is required and necessary to all farmers. Rainfall Prediction is the application of science and technology to predict the state of the atmosphere. It is important to exactly determine the rainfall for effective use of water resources, crop productivity and pre planning of water structures. Using different data mining techniques, it can predict rainfall. Data mining techniques are used to estimate the rainfall numerically. This paper focuses some of the popular data mining algorithms for rainfall prediction. Logistic Regression, Support Vector Classifier, Decision Tree Classifier and Random Forest Classifier are some of the algorithms compared in this paper. From that comparison, it can analyze which method gives better accuracy for rainfall prediction.

INTRODUCTION

BACKGROUND AND BASICS

Rainfall Prediction is one of the most challenging tasks. Though already many algorithms have been proposed but still accurate prediction of rainfall is very difficult. In an agricultural country like India, the success or failure of the crops and water scarcity in any year is always viewed with greatest concern. A small fluctuation in the seasonal rainfall can have devastating impacts on agriculture sector. Accurate rainfall prediction has a potential benefit of preventing causalities and damages caused by natural disasters. Under certain circumstances such as flood and drought, highly accurate rainfall prediction is useful for agriculture management and disaster prevention. In this paper, various algorithms have been analyzed. Data mining techniques are efficiently used in rainfall prediction.

EXISTING SYSTEM

Agriculture is the strength of our Indian economy. Farmer only depends upon monsoon to be their cultivation. The good crop productivity needs good soil, fertilizer and also good climate. Weather forecasting is the very important requirement of the each farmer. Due to the sudden changes in climate/weather, The people are suffered economically and physically. Weather prediction is one of the challenging problems in current state.

PROPOSED SYSTEM

Rainfall is important for food production plan, water resource management and all activity plans in the nature. The occurrence of prolonged dry period or heavy rain at the critical stages of the crop growth and development may lead to significantly reduce crop yield. India is an agricultural country and its economy are largely based upon crop productivity. Rainfall forecasting has been one of the most scientifically and technologically challenging problems around the world in the last century.

REQUIREMENTS

SYSTEM REQUIREMENT SPECIFICATION

Hardware Specification:

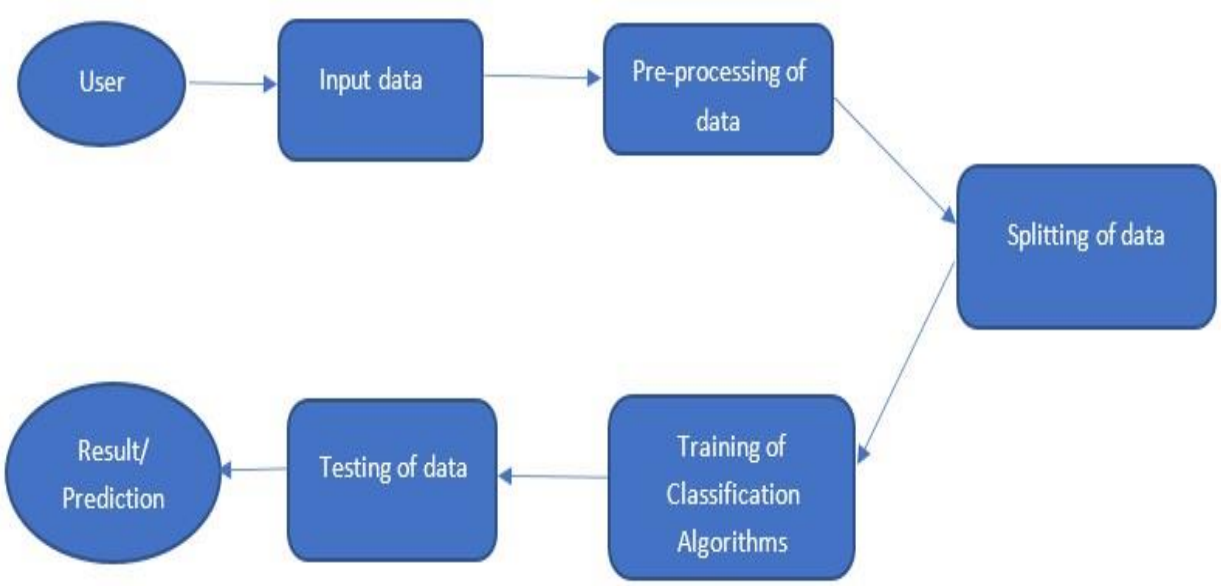
- Processor : Intel core 15
- Processor Speed : 1.75GHZ to 2.40GHZ
- RAM : 4GB
- Hard Disk : 4GB to 30GB

Software Requirements:

- Language : Python
- IDE : Jupyter Notebook
- Operating System : Windows 8/10
- Framework : Flask

METHODOLOGY

PROPOSED METHODOLOGY



BIBLOGRAPHY

- https://www.geeksforgeeks.org/rainfall-prediction-using-machine-learning-python/
- https://bard.google.com/chat
- https://www.ijraset.com/research-paper/rainfall-prediction-using-ml
- https://flask.palletsprojects.com/en/3.0.x/