DEPARTMENT OF COMPUTER SCCIENCE AND ENGINEERING

CROP YIELD PREDICTION IN AGRICULTURE SECTOR USING MACHINE LEARNING

CROP YIELD PREDICTION USING ML

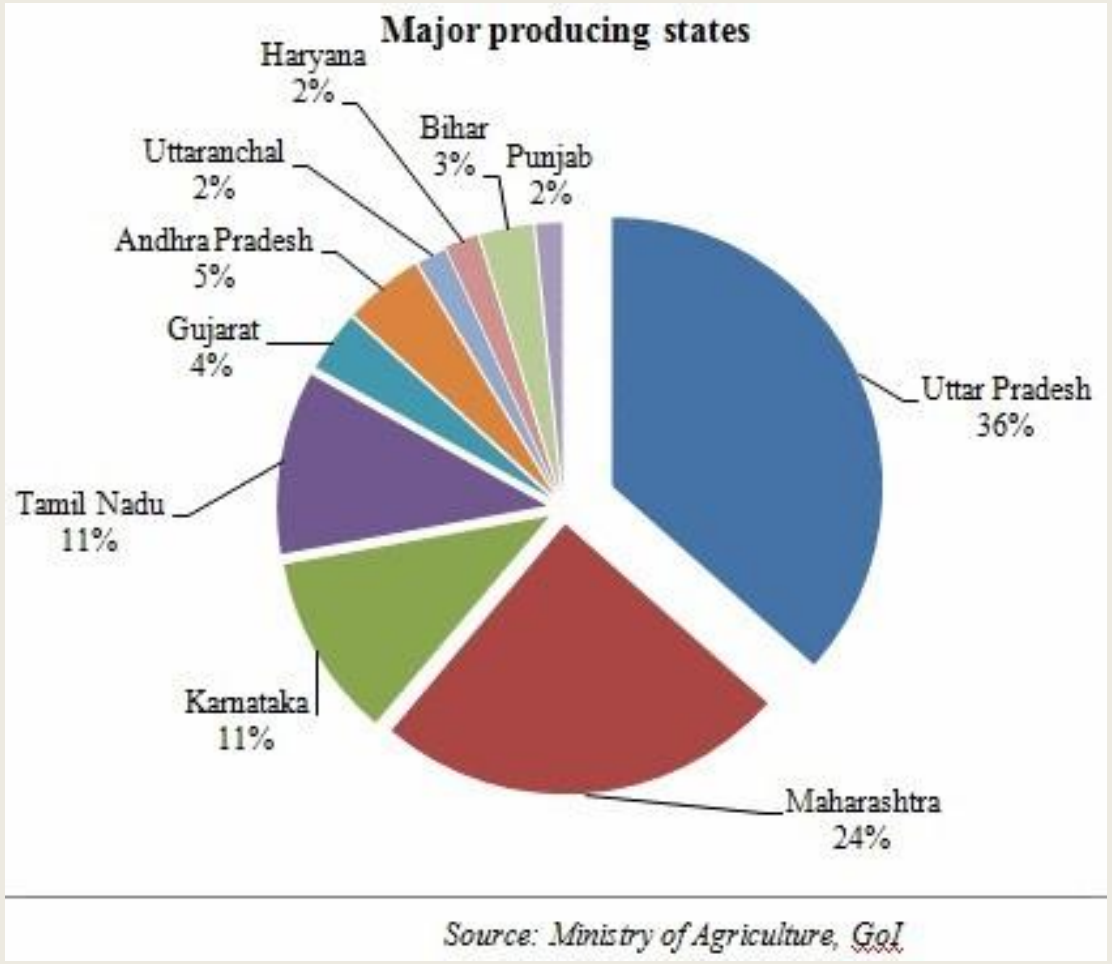
Agenda

- Introduction
- Problem Statement
- Existing System
- Proposed System
- Literature Survey
- Methodology
- System Requirements
- Expected Outcome

Introduction

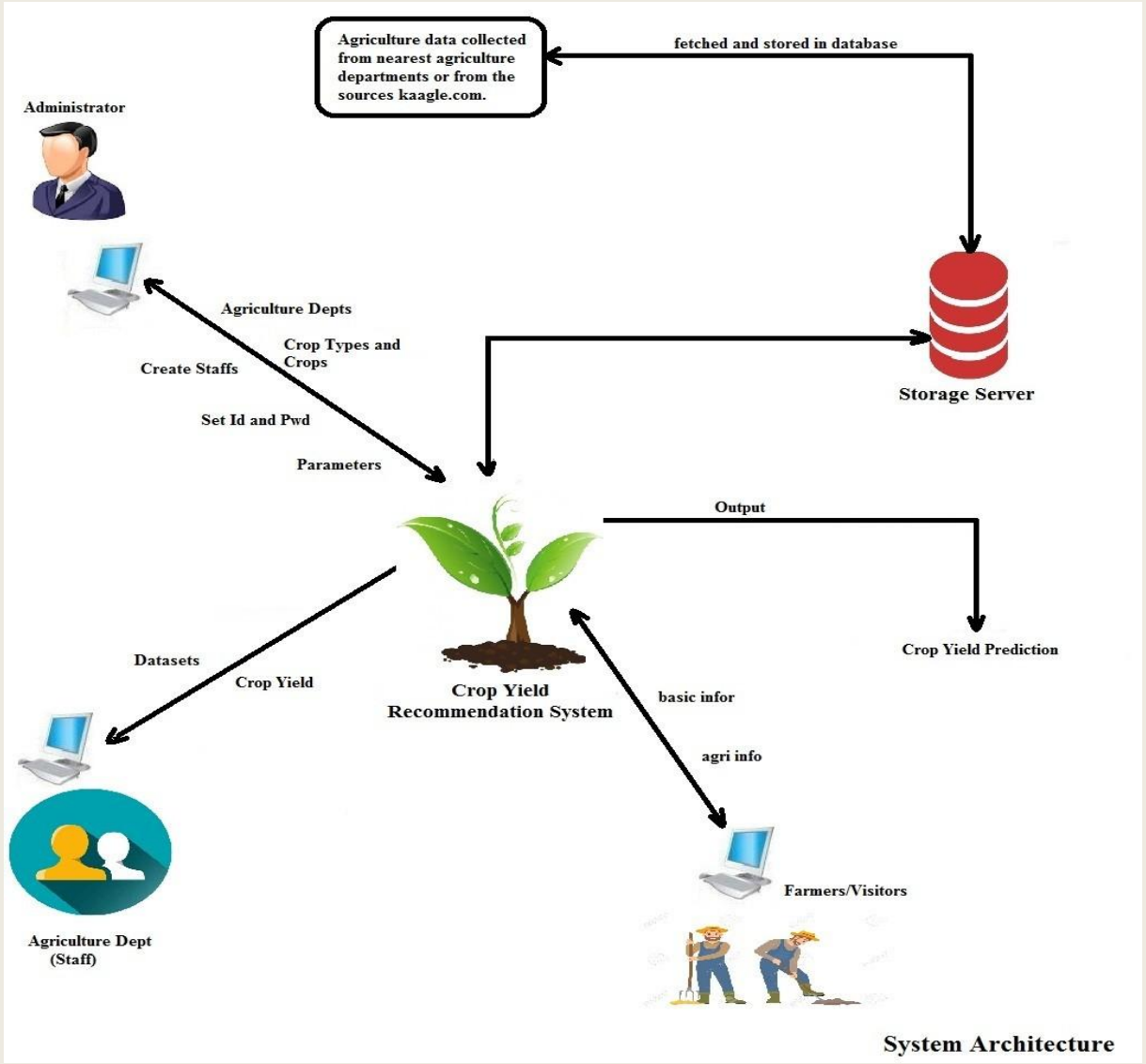
- India is an agriculture based country where most of the people derive their living from this sector. Agriculture is having a great impact on the country’s economy.
- In the last decade India has seen serious natural calamities like drought or flood if not this then there may be sudden pest attack destroying the crop.

Major Crop Producing States



Prediction of crop yield in advance can help the farmers and the Government bodies to plan for storage, selling, fixing minimum support price, importing /exporting etc.

System Architecture



Problem Statement

- Crop yield prediction based on the effect of temperature, rainfall, humidity and other constraints is an essential factor to deal with storage of crops.
- Predicting the crop yield with high accuracy is one of the challenging task in the current agriculture sector

Existing System

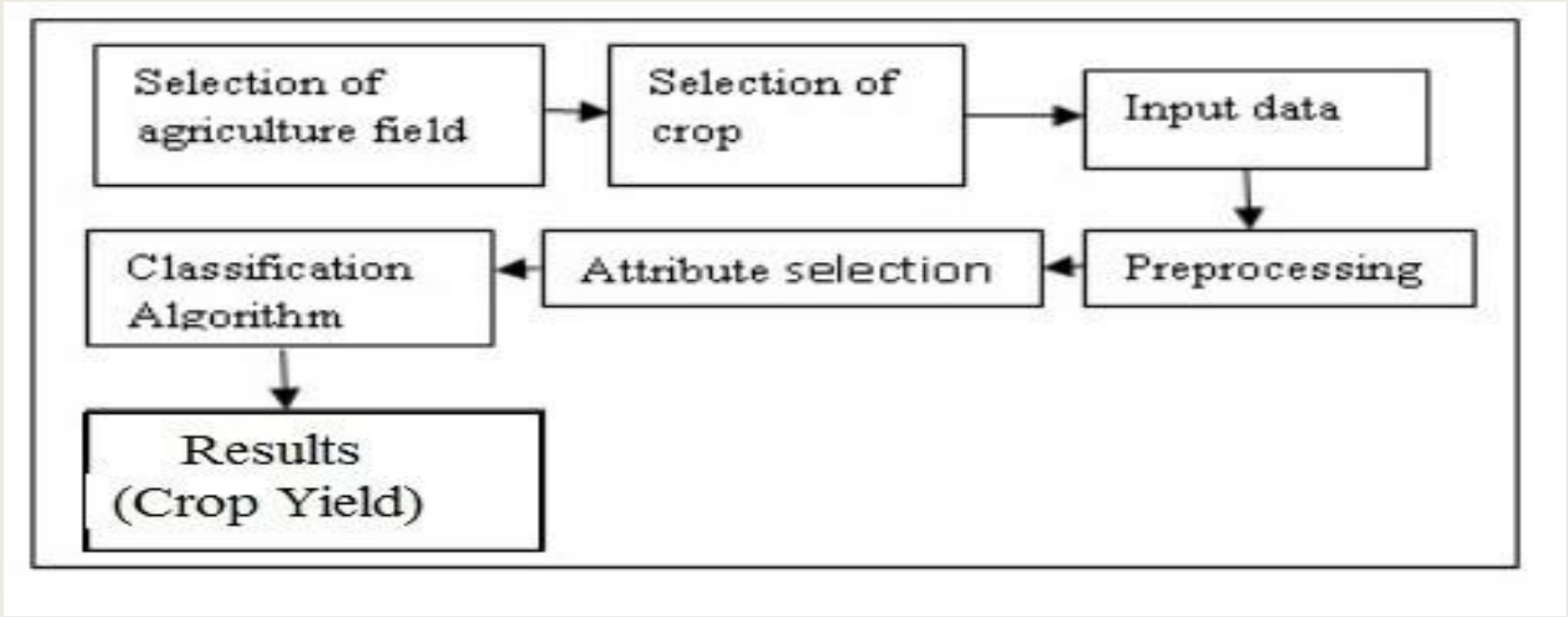
- Current system is manual where we compare the previous results with the present.
- There is no automation to predict the crop yield using the constraints temperature, rainfall, humidity, area and region.

Limitations

- Manual Search
- Time Consuming
- Less Reliable
- Less Efficient
- Less User Satisfaction

Proposed System

Proposed system is an agriculture application which analyzes the previous data related to rainfall, temperature, humidity and crop yield.

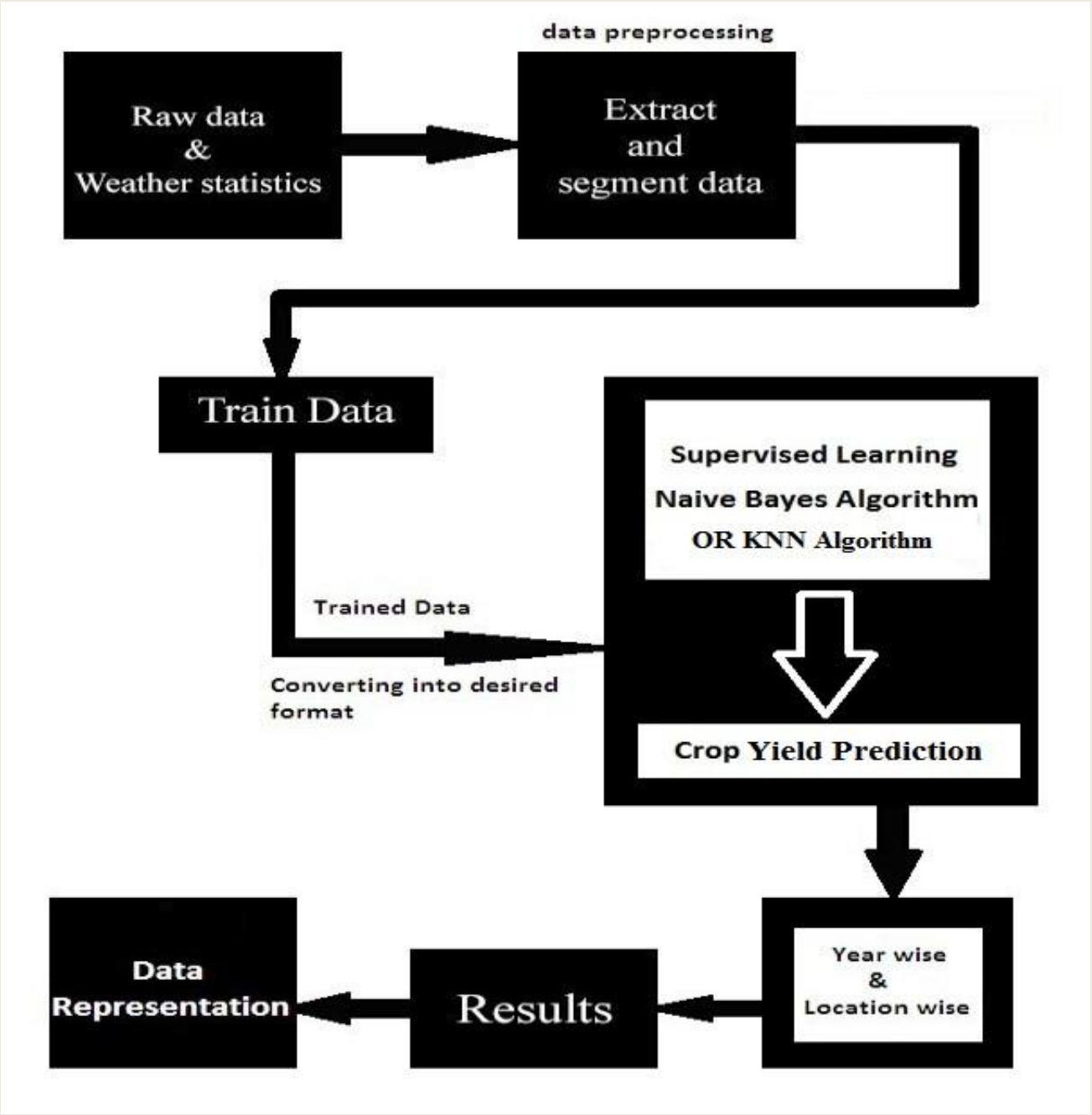


Scope And Objectives

- System objective is to estimate or forecast the yield of crop.
- System meant for multiple regions.
- System makes use of data collected from agriculture department.
- Proposed system makes use of data science in agriculture for decision making.
- System uses "*Classification Rules*" technique - Naive Bayes Algorithm for crop yield prediction.

terature Survey

Serial NO	Title	Author	Year of Publication	Method Used
1	Data Mining Techniques & Applications to Agricultural Yield Data.	D Ramesh, B Vishnu Vardhan.	2013	k nearest neighbor, k means algorithm
2	Effect of Temperature and Rainfall on Paddy Yield using Data Mining	Kuljit Kaur, Kanwalpreet Singh Attwal	2017	Apriori Algorithm



Methodology

System Requirement

SOFTWARE REQUIREMENT

- IDE : **PyCharm**
- Programming Language : **Python**
- End : **DB-Lite**

HARDWARE REQUIREMENT

- RAM : **2GB+**
- Processor : **Pentium 4+**
- Processor Speed : **2ghz+**

Expected Output

System uses different agriculture parameters for yield prediction, parameters such as temperature, rainfall, PH value, nitrogen, potassium, zinc, iron etc. Training datasets trained using ML algorithm “bayesian classifier” and crop yield for future will be predicted in tons.

Thank You