

# **Big Data and Analytics Project**

**(2019-20)**

**To analyse the appropriate season and  
environment for crop cultivation**

## **SYNOPSIS**



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## **Table of Contents:**

<b>Serial No</b>	<b>Content</b>	<b>Page No.</b>
<b>i</b>	<b>Introduction</b>	<b>3</b>
<b>ii</b>	<b>About the Project</b>	<b>3</b>
<b>iii</b>	<b>Motivation</b>	<b>4</b>
<b>iv</b>	<b>Future Prospects</b>	<b>4</b>
<b>v</b>	<b>Requirements</b>	<b>5</b>

## **Introduction:**

Government is spending a lot on agriculture data. Data is growing much faster than the computation speeds. An example of Big Data is crop sales. Crop sales data will be used to represent the crops data. Since government has actively and continuously collecting crop sales dataset but the size of dataset are considered to be a big data which are a real-world data, which is really a hard problem to analyze it. In order to analyze big data, data mining and statistical techniques can be expanded under parallel and distributed computing platform, also which consumes large amount of storage and computational time on handling large dataset. In conforms to its name, Big Data Analytics turns out as a important research topic. Recently, Big Data get its popularity among data scientists and business persons.

## **About the Project:**

- We will analyse the perfect season to cultivate the specific types of crops, On the basis of soil fertility, moisture contained in that area, availability of water and availability of sunlight in different areas. We will also tell the transportation costs for the different states.
- How much cost it will going to take and how much profit the farmers will get.
- We will use Machine Learning to predict the values and show the data of the respective state using Graphs and Pie Charts using Python.

## **Motivation:**

We know that many farmers face problems to select crop for specific season, what cost it will take in whole season and how much will they earn from it. Some middle people take profit from it and make fool of poor farmers. Farmers also commit suicides because of the failure of crops. So with the help of our project, farmers will be able to analyze best season for cultivating specific types of crops according of their best season.

## **Future Prospects:**

We will try to increase the dataset by bringing in more fields so that we can give more advice to the farmers which crop should be crop in a given season of specific state.

We will make the website easy to use and in more languages so that farmers can easily use the website.

We will develop better Machine Learning algorithms so that farmer can find if their crops are affected by any insecticides and what should be the precautions or cure for that.

We will try to make mobile app for this website so that it is accessible to every farmer.

# **Requirements:**

## **Hardware Requirements:**

- 1 TB Memory
- 8 GB RAM
- i3 processor

## **Software Requirements:**

- Hadoop
- MongoDB
- R Studio
- Linux OS