

PROJECT DEVELOPMENT PHASE

SPRINT-4

Team ID	PNT2022TMID25946
Project Name	ESTIMATE THE CROP YIELD USING DATA ANALYTICS

Coding

```
<?php
    session_start();

    if (empty($_SESSION)){
        header("location:index.php");
    }
?>

<!DOCTYPE html>

<html>

<head>

    <meta charset="utf-8">

    <title>IBM PROJECT</title>

    <link rel="stylesheet" type="text/css" href="project css.css">

</head>

<body>

<header>

    <nav>

        <div>

            <a href="#about">About</a>

            <a href="#dataset">Dataset</a>

            <a href="#visualizations">Visualizations</a>
```

[Algorithms](#algorithm)

Estimation Of Crop Yeild

Using

Data Analytics

Data Analytics

Data science is the practice of mining large data sets of raw data, both structured and

unstructured, to identify patterns and extract actionable insight from them. This is an interdisciplinary field, and the foundations of data science include statistics, inference, computer science, predictive analytics, machine learning algorithm development, and new technologies to gain insights from big data.

Data analytics is one of the fields of Data science. Data analytics is the process of exploring and analyzing large datasets to find hidden patterns, unseen trends, discover correlations, and derive valuable insights to make business predictions.

In this project, we are going to estimate the crop yeild using Data analytics. Crop production in India is one of the most important sources of income and India is one of the top countries to produce crops. As per this project we will be analyzing some important visualization, creating a dashboard and by going through these we will get most of the insights of Crop production in India. This website will be useful for farmers to make better decisions related to agriculture.

<section id="dataset" class="section">

<h2>Dataset</h2>

<p>A Dataset is a set or collection of data. This set is normally presented in a tabular pattern. Every column describes a particular variable. And each row corresponds to a given member of the data set.</p>

<p>The dataset, we are working with, has 2,46,092 data points (rows) and 6 features (columns) describing each crop production related details. Let's understand the data we're working with and give a brief overview of what each feature represents or should represent
State Name - All the Indian State names, District Name -Different District names, Crop Year- contains the crop years, Season – Different seasons for crop production, Area- Total number of areas covered, Production- production of crops.</p>

<center></center>

<p>Link for Dataset : Dataset</p>

</section>

<hr>

<section id="visualizations" class="section">

<h2>Data Visualization</h2>

<p style="text-align: justify;">Data visualization is the practice of translating information into a visual context, such as a map or graph, to make data easier for the human brain to understand and pull insights from. The main goal of data visualization is to make it easier to identify patterns, trends and outliers in large data sets.</p>

<p>Using the Crop production in Indian dataset, we plan to create various graphs and charts to highlight the insights and visualizations.</p>

<ul id="indent">

Build a Visualizaiton to showcase Average Crop Production by Seasons.

Showcase the Yearly usage of Area in Crop Production.

Build a visualization to show case top 10 States in Crop Yeild Production by Area.

Build the required Visualization to showcase the Crop Production by State.

Build Visual analytics to represent the Sales with Seasonal Crop Production using a Text representation.

<iframe
src="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FSprint2&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode=embedded&action=view&mode=dashboard&subView=model000001845cd66489_00000003" width="1200" height="1000" frameborder="0" gesture="media" allow="encrypted-media" allowfullscreen=""></iframe>

</section>

<section id="algorithm" class="section">

<div id="con">

<h2>Algorithms</h2>

<p>An Algorithm in Data analytics is a set of heuristics and calculations that creates a model from data. To create a model, the algorithm first analyzes the data you provide, looking for specific types of patterns or trends. There are several algorithms available in Data analytics. Choosing the best algorithm to use for a specific analytical task can be a challenge. Each algorithm produces a different result, and some algorithms can produce more than one type of result. Some of them are,</p>

<b style="font-size: 1.5em;">Linear Regression Algorithm:

<p>Linear regression is one of the easiest and most popular Machine Learning algorithms. It is a statistical method that is used for predictive analysis. Linear regression makes predictions for continuous/real or numeric variables. </p>

<b style="font-size: 1.5em;">Logistic Regression Algorithm:

<p>Logistic regression is one of the most popular Machine Learning algorithms, which comes under the Supervised Learning technique. It is used for predicting the categorical dependent variable using a given set of independent variables. Therefore the outcome must be a categorical or discrete value. </p>

<b style="font-size: 1.5em;">K-Nearest Neighbor(KNN) Algorithm:

<p>K-nearest neighbors (kNN) is a supervised machine learning technique that may be used to handle both classification and regression tasks and is also frequently used in missing value imputation. It is based on the idea that the observations closest to a given data point are the most "similar" observations in a data set, and we can therefore classify unforeseen points based on the values of the closest existing points.</p>

Decision Tree Algorithm:

Decision Tree is a supervised machine learning algorithm where all the decisions were made based on some conditions. The decision tree has a root node and leaf nodes extended from the root node. These nodes were decided based on some parameters like Gini index, entropy, information gain.

- Related Data Analytics Project Ideas
- [Advanced Project Ideas](https://www.interviewbit.com/blog/data-analytics-projects/)
- [Beginners Project Ideas](https://www.coursera.org/articles/data-analytics-projects-for-beginners)

- For Dataset Refer
- [Kaggle Site](https://www.kaggle.com/datasets)

```
        <li>

            <a href="https://data.gov.in/">Government Site</a>

        </li>

    </ul><br>

</div>

</footer>

</body>

</html>
```

Style Coding

```
*{

    margin: 0;

    padding: 0;

}

header{

    background-image: url("Agriculture.jpg");

    background-repeat: no-repeat;

    background-size: cover;

    overflow-x: hidden;

    overflow-y: hidden;

    width: 100%;

    height: 100vh;

}

header h1{

    text-align: center;

    text-transform: capitalize;

    font-size: 3em;
```

```
        padding-top: 25vh;
    }
#head{
    text-align: center;
    text-transform: capitalize;
    font-size: 3em;
    padding-top: 1vh;
}
header p{
    text-align: center;
    text-transform: capitalize;
    font-size: 1.5em;
    padding-top: 10vh;
    padding-left: 30vh;
    padding-right: 30vh;
}
nav div{
    background-color: #E1C16E;
    width: 100%;
    height: 40px;
}
nav a:hover, footer a:hover{
    background-color: #ffffff;
}
nav a{
    color: #000;
    font-size: 1.5em;
```

```
        text-decoration: none;

        text-transform: capitalize;

        display: inline-block;

        width: 150px;

        text-align: center;

        padding: 10px 0;
    }

    footer{

        background-color: #E1C16E;

        width: 100%;

        height: 100%;

    }

    footer div{

        display: grid;

        grid-gap: 10px;

        grid-template-columns: repeat(3, 1fr);

        text-align: left;

        padding-left: 10vh;

    }

    footer a{

        font-size: 0.7em;

        color: #000000;

        text-decoration: none;

    }

    footer ul{

        list-style: none;
```



```
}

footer li{

    font-size: 1.5em;

    color: #000000;

}


.section ul{

    font-size: 1.5em;

}

.section p{

    font-size: 1.5em;

}

.section h2{

    text-align: center;

    padding: 15px;

}

#about{

    background-image: url("Data Analytics.jpeg");

    background-repeat: no-repeat;

    background-size: cover;

    overflow-x: hidden;

    overflow-y: hidden;

    width: 100%;

    height: 100vh;

    padding-right: 20vh;

    padding-left: 20vh;

    padding-top: 40px;
```

```
        padding-bottom: 40px;

        color: #ffffff;

        text-align: justify;
    }

    #con {

        width: 85%;

    }

    a.brd {

        background-color: aliceblue;

        padding: 4px;

        border-radius: 30px;

    }

    #dataset{

        padding-right: 10vh;

        padding-left: 10vh;

        padding-top: 40px;

        padding-bottom: 40px;

        text-align: justify;

    }

    #visualizations{

        padding-right: 10vh;

        padding-left: 10vh;

        padding-top: 40px;

        padding-bottom: 40px;

    }

    #algorithm{
```

```
background-image: url("Algorithm.jpg");

background-repeat: no-repeat;

background-size: cover;

overflow-x: hidden;

overflow-y: hidden;

width: 100%;

padding-right: 10vh;

padding-left: 10vh;

padding-top: 40px;

padding-bottom: 40px;

color: #ffffff;

text-align: justify;
}

#indent{

padding-left: 15vh;

}
```