

PROJECT REPORT

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

CODING

REGISTRATION PAGE:

```
<html>

<head>

    <title>Register</title>

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

</head>

<body>

    <br>

    <center><h1>Registration Form</h1></center>

    <section id="form-details" class="section-p1">

        <center>

            <form action="register.php" method="post" name="form1">

                <table width="100%">

                    <tr>

                        <td><label class="l1">Name</label></td>

                        <td><input type="text" name="name" required></td>
```

```

</tr>

<tr>

    <td><label class="l1">Email</label></td>

    <td><input type="email" name="email" required></td>

</tr>

<td><label class="l1">Password</label></td>

<td><input type="password" name="password" required></td>

</tr>

<tr>

    <td></td>

    <td><input type="submit" class="normal" name="register"
value="Register"></td>

</tr>

</table>

<a href="/ibm/" class="brd">Login</a>

<?php

//including the database connection file

include_once("db-config.php");

// Check If form submitted, insert user data into database.

if (isset($_POST['register'])) {

    $name    = $_POST['name'];

    $email   = $_POST['email'];

```

```
$password = $_POST['password'];

// If email already exists, throw error

$email_result = mysqli_query($mysqli, "select 'email' from users where
email='$email' and password='$password'");

// Count the number of row matched

$user_matched = mysqli_num_rows($email_result);

// If number of user rows returned more than 0, it means email already
exists

if ($user_matched > 0) {

    echo "<br/><br/><div id='msg'><strong>Error: </strong> User
already exists with the email id </div>";

} else {

    // Insert user data into database

    $result = mysqli_query($mysqli, "INSERT INTO
users(name,email,password) VALUES('$name','$email','$password')");

    // check if user data inserted successfully.

    if ($result) {

        echo "<br/><div id='msg'><h3>User Registered
successfully.</h3></div>";

    } else {

        echo "<br/><div id='msg'><h3>Registration error. Please try
again." . mysqli_error($mysqli). "</h3></div>";

    }

}
```

```
        }

    }

}

?>

</form>

</center>

<div class="imgsec">

    <div>

        

    </div>

</div>

</section>

</body>

</html>
```

LOGIN

```
<?php

    session_start();

    // Create database connection using config file

    include_once("db-config.php");

    // If form submitted, collect email and password from form
```

```

if (isset($_POST['login'])) {

    $email    = $_POST['email'];

    $password = $_POST['password'];

    // Check if a user exists with given username & password

    $result = mysqli_query($mysqli, "select 'email', 'password' from users

        where email='$email' and password='$password'");

    // Count the number of user/rows returned by query

    $user_matched = mysqli_num_rows($result);

    // Check If user matched/exist, store user email in session and redirect

    if ($user_matched > 0) {

        $_SESSION["email"] = $email;

        header("location: project.php");

    } else {

        echo "<div id='msg'>User email or password is not matched <br/></div>";

    }

}

?>

<!DOCTYPE html>

<html>

<head>

    <title>Login</title>

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

```

```
</head>
```

```
<body class="b1">
```

```
    <center><h1>Login Form</h1></center>
```

```
    <section id="form-details" class="section-p1">
```

```
        <center>
```

```
        <form action="index.php" method="post" name="form1">
```

```
            <table width="100%">
```

```
                <tr>
```

```
                    <td><label class="l1">Email</label></td>
```

```
                    <td><input type="text" name="email"></td>
```

```
                </tr>
```

```
                <tr>
```

```
                    <td><label class="l1">Password</label></td>
```

```
                    <td><input type="password" name="password"></td>
```

```
                </tr>
```

```
                <tr>
```

```
                    <td></td>
```

```
                    <td><input type="submit" class="normal" name="login"
value="Login"></td>
```

```
                </tr>
```

```
            </table>
```

```
            <a href="register.php" class="brd">Register</a>
```

```
</form>

</center>

<div class="imgsec">

  <div>

    

  </div>

</div>

</section>

</body>

</html>
```

STYLE

```
*{

  margin: 0;

  padding: 0;

  box-sizing: border-box;

  font-family: 'Spartan', sans-serif;

}

h1{

  font-size: 50px;

  line-height: 64px;

  color: #222;
```

```
h2{
```

```
    font-size: 46px;
```

```
    line-height: 54px;
```

```
    color: #222;
```

```
}
```

```
h4{
```

```
    font-size: 20px;
```

```
    color: #222;
```

```
}
```

```
h6{
```

```
    font-weight: 700;
```

```
    font-size: 12px;
```

```
}
```

```
p{
```

```
    font-size: 16px;
```

```
    color: #465b52;
```

```
    margin: 15px 0 20px 0;
```

```
}
```

```
.section-p1{
```

```
    padding: 40px 80px;
```

```
}
```



```
.normal{  
  
font-size: 14px;  
  
font-weight: 600;  
  
padding: 15px 30px;  
  
color: #000;  
  
background-color: #2ddfc3;  
  
border-radius: 4px;  
  
cursor: pointer;  
  
border: none;  
  
outline: none;  
  
transition: 0.2s;  
  
}  
  
#msg {  
  
padding: 20px 20px;  
  
text-align: center;  
  
background-color: tomato;  
  
margin: 20px 300px 20px 300px;  
  
border-radius: 50px;  
  
color: antiquewhite;  
  
}  
  
body{  
  
width: 100%;
```

```
        background-image: url("img/crop1.jpg");

        background-repeat: no-repeat;

        background-size: cover;

    }
```

```
.b1{

        background-image: url("img/crop2.jpg");

        background-repeat: no-repeat;

        background-size: cover;

    }
```

```
.section-p1{

        padding: 40px 80px;

    }
```

```
img.a1 {

        width: 100%;

    }
```

```
.imgsec {

        width: 30%;

    }
```

```
.11 {

        color: aliceblue;
```

```
}

/* Form */

#form-details{

    display: flex;

    justify-content: space-between;

    margin: 30px;

    padding: 80px;

}

#form-details form{

    width: 600px;

    display: flex;

    flex-direction: column;

    align-items: flex-start;

}

#form-details form span{

    font-size: 12px;

}

#form-details form h2{

    font-size: 26px;

    line-height: 35px;

    padding: 20px 0;

}
```

```
#form-details form input{

    border-radius: 10px;

    width: 100%;

    padding: 12px 15px;

    outline: none;

    margin-bottom: 20px;

    border: 1px solid #e1e1e1;

}

#form-details form button{

    background-color: #088178;

    color: #fff;

}

#form-details .imgsec div{

    padding-bottom: 25px;

}
```

CROP YIELD WEBPAGE

```
<?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>

About

Dataset

Visualizations

Algorithms

</nav>

<section>

<div>

<h1>Estimation Of Crop Yeild </h1>

<h1 id="head">Using </h1>

<h1 id="head">Data Analytics</h1>

</div>

</section>

</header>

<section id="about" class="section">

<div id="con">

<h2>Data Analytics</h2>

<p>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.</p>

<p>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.</p>

<P>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.</P>

</div>

</section>

<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 Kaggle: Dataset</p>

</section>

<hr>

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

<h2>Data Visualization</h2>

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.

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

-

- Build a Visualization 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 Yield Production by Area.

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

- Build Visual analytics to represent the States 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_appba
r=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:

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.

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

<https://www.interviewbit.com/blog/data-analytics-projects/>Advanced Project Ideas

Beginners Project Ideas

For Dataset Refer

Kaggle
Site

Government Site

</div>

</footer>

</body>

</html>

STYLE

```
*{  
  
    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;

}
```

DATABASE CONNECTIVITY

```
<?php

$databaseHost    = 'localhost';

$databaseName    = 'crop_yield';

$databaseUsername = 'root';

$databasePassword = "";


$mysqli = mysqli_connect($databaseHost, $databaseUsername,
$databasePassword, $databaseName);
```