

# **Introduction:**

## **Overview:**

- This project tells you about the detailed description of Indian agriculture insights.
- The betterment of Indian agriculture could be known by the analyzations of the datas.
- Since India agriculture plays an vital role in employment rate, more than 50% percent of employment rate in India is based on the agriculture
- In this web-integration, which consists of an Dashboard, Story and a Report that provides better understanding in agriculture of India.
- The impact on agriculture can be seen according to crops,season,area which plays an important role in understanding the enhancement of the web-integration.

## **Purpose:**

- The purpose of this web-integration is , that it provides you with very good grasp in Indian agriculture.

- The dashboard usually lets you know about the various regions that has various crops, season, production, yields, and production units.
- Whereas the story lets you to know the stronger insights in Indian agriculture that is quite simple.
- In addition to that report notifies about the salient feature of the agriculture.
- By this provided visualizations you could possibly determine the importance of each and every aspects of cultivating the crops.

## **Literature Survey:**

### **Existing Problem:**

- Soil Erosion
- Irrigation Problem
- Lack of land

### **Existing Solution:**

- Soil erosion could be solved by replanting with vegetation and covering with mulch are good solutions.

- Irrigation Problem could be solved by having an good irrigation plan while cultivating crops.

## **Proposed solution:**

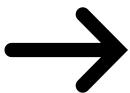
- The soil erosion could be reduced by using manure , vegetation , and natural minerals.
- The irrigation in agriculture could be done by utilizing the proper irrigation system required for the particular crop, like sprinkler irrigation for black gram crops.
- The lack of land in agriculture could be solved eventually by sharing the land to each other , since if the people can share their agricultural lands to each other for an specific crop growth and cultivation, the profit could be shared equally and it reduces the lack of land in agriculture for some particular crops.
- By this the person not only gains profit they could also cultivate the required crops for fields.

## **THEORITICAL ANALYSIS:**

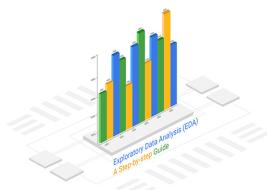
### **Block Diagram:**



DATASET



Dataset required



Cleaning the dataset and doing EDA

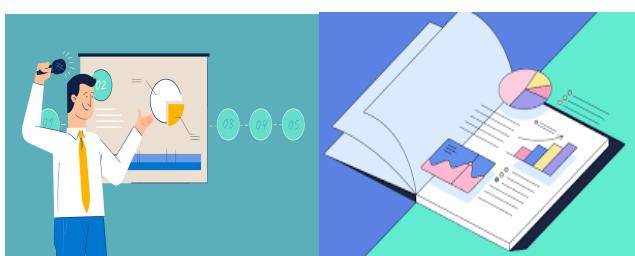


Dashboard

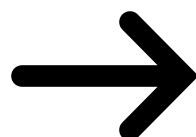
IBM<sup>®</sup>  
COGNOS<sup>®</sup>  
ANALYTICS



Data analyzing with IBM cog-nos



Story and Report



Web-integration

User



## Hardware/software designing:

## **Hardware requirement:**

- A quad /hexa core processor such as intel's i3 11th generation or AMD Ryzen 3 3000series could be used as hardware processor ,minimum 4-8gb of RAM is required, whereas to store data minimum 128gb of ROM of storage is required a stable internet connection is required at the minimum speed of 500kbps.

## **Software requirement:**

- Any text editor such as notepad or vs code could be used for web-integration.
- Jupyter notebook or even vs code could be used for data analyzing ,data cleaning and data wrangling.
- IBM cog-nos is required to create dashboard,story, and report.
- Excel or IBM cog-nos data module could be used for further cleaning of data.

## **Experimental Investigations:**

- While working on the data cleaning we were able to know that the rice is cultivated vastly among India.
- India provides an employment of more than 50%percent through agriculture.
- Also we were able to find that the India's employment

rate is gradually increasing after 2019.

- The crop patterns plays an vital role in soil's life and agriculture of different crops after the cultivation.
- Lack of experience and knowledge in agriculture leads to produce irrelevant and wastage of crops.
- Agriculture requires good knowledge in seeds,soil, irrigation,manure and etc.. for producing a crop.

## Flowchart:



# Result:

The screenshot shows a web browser window titled "agriculture" displaying the "AGRICULTURE ANALYSIS" dashboard. The main header features a large "WELCOME" title and the tagline "Cultivating Healthiness". A prominent yellow "START NOW" button is centered over a background image of a lush green agricultural field at sunset.

The screenshot shows the "ABOUT" section of the dashboard. It features a photograph of a person's hands holding a large green leafy vegetable, likely a cabbage. To the right, there is a detailed paragraph about the significance of agriculture in Indian economy and society, mentioning its contribution to GDP and employment rates.

The screenshot shows the "Significance Of Agriculture" section. It includes a photograph of a person working in a field of green crops. To the right, there is a diagram illustrating various agricultural technologies, including a magnifying glass icon, a water drop icon, a computer monitor icon, and a plant icon, all connected by arrows under the heading "SMART AGRICULTURE".

The screenshot shows the "Crop Patterns" section. It features a photograph of a person working in a field of green crops. To the right, there is a detailed paragraph defining a cropping system as the type and sequence of crops grown and practices used for growing them, emphasizing its traditional structure to maximize crop yields.

## Crop Patterns

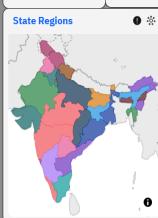


A cropping system refers to the type and sequence of crops grown and practices used for growing them. It encompasses all cropping sequences practiced in a space and time over an area, along with techniques of crop production. Cropping systems have been traditionally structured to maximize crop yields. Agriculture in India mainly depends on monsoon. If monsoon is good, the production will be more and if monsoon is less than average then the crops fail.

[Home](#)

## DASHBOARD

Production: 6.69B | Employment Rate: 51.47 | Yield: 1.32M

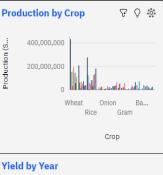
State Regions: 

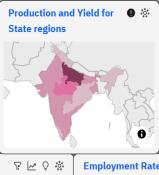
Production By State: 

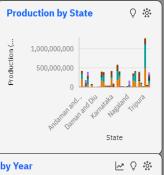
District: Select value | Year: Select... | Crop: Crop | Production Units: Select value | Season: Select value

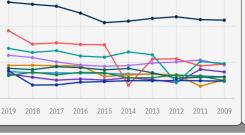
[Home](#)

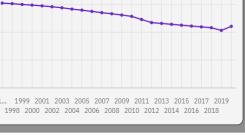
## DASHBOARD

Production by Crop: 

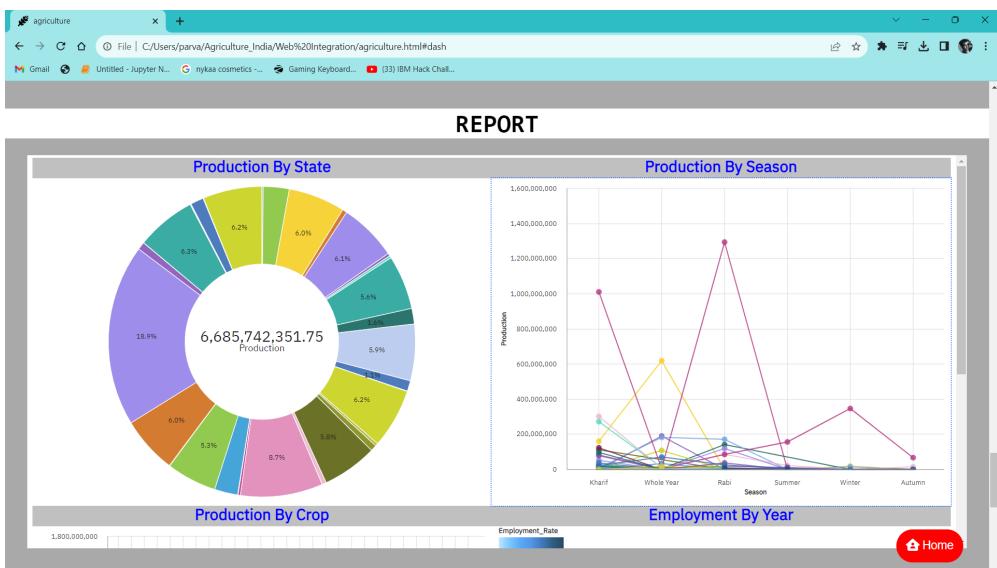
Production and Yield for State regions: 

Production by State: 

Yield by Year: 

Employment Rate by Year: 

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## **Output of the project:**

- According to which season which crop should be cultivated.
- Ways to increase agriculture through lands ,area, season.
- Approaches to increase the rate of employment in Indian agriculture.

## **• Advantages and Disadvantages:**

### **Advantages:**

- Reduction in soil erosion.
- Improvement in Employment rate.
- Improved profit in land by eliminating the lack of lands for particular crops.
- Proper irrigation might get the crops to grow healthier with the required amount of water.

### **Disadvantages:**

- Use of mineral might ease the poor soil dense.
- In sharing the land with the person ,it might not always be comfortable ,the particular person may cheat/evade the crops in the field.
- If irrigation of water is not proper ,it may lead to water leakage.

## **Applications:**

This solution can be applied to the areas where there is huge availability of agricultural area.

- Once the person is convinced with crops they cultivate according to season, soil, area, and required cultivation and harvesting plan.
- Since for the growth and lessen time for harvesting the crops requires suitable land, soil, season and area which could be further chosen by the farmer wisely.
- The use of inappropriate manure might lead to slaughter of soil, so use the right natural manure for soil in agriculture.

## **Conclusion:**

- Better grasp in agriculture.
- Increase in growth of agriculture and employment.
- By optimizing the crop according to soil conditions ensures us the significant increases agriculture output and efficiency.
- This not only allows us to cultivate greater quantity of crops but also confirms the quality of crops cultivated and harvested.
- Thus it leads to the improvement health and wellbeing for consumers.

## **Future scope:**

- The usage of drones for manure and irrigation might

quite performs well and lessen the work for farmers.

- Use of automated vehicles for harvesting and cultivation of crops.
- By use of AI we might able to know and predict the insights of agriculture in future.
- Creating an AI chatbot and AI listener that usually listens to the data they enter and response properly.
- By applying their daily activity regarding their agriculture might help the AI to far more understand better and to give an best advice to cultivate and harvest the best.

## **Bibliography:**

### Referred websites:

- geeksforgeeks,w3schools,scalar,freecodecamp, tutorialspot

### Referred Youtube channel:

- codebasics

### Referred agriculture insights:

- InsightsIAS,world-bank,wikipedia,agricoop,ICAR

### Referred datasets :

- Kaggle,worldbank

## APPENDEX:

### **SOURCE CODE:**

#### **STYLE CSS:**

```
body{margin:0;  
background-color:#A9A9A9;  
font-family:monospace;}  
.header{top: 0;
```

```
background-color: yellow;
display:flex;
padding:1em;
background-color: white;}
header a{text-decoration:none;
color:black;}
#logo{flex:4;
font-size:2.25em;
text-align:left;}
nav(display:flex;
font-size:1.25em;
text-align:right;}
nav a{flex:4;}
nav a:hover{color:red;
text-decoration:underline;}
#start2{padding:20px;
margin-top:20em;}
#para1{color:black;
font-size:1.5em;}
.container { position: relative;
text-align: center;
color: white;}
.centered1{position: absolute;
font-size:3em;
top: 30%;
left: 50%;
transform: translate(-50%, -50%);}
.centered2{position: absolute;
font-size:1em;
top: 40%;
left: 50%;
transform: translate(-50%, -50%);}
.centerimage{position: absolute;
font-size:3em;
top: 50%;
left: 50%;
transform: translate(-50%, -50%);}
.text{background-color:yellow;
color:black;
font-size: 1.2em;
padding-left: 20px;
border-radius:25px;}
#about{background-color:white;
text-align:center;
margin-top:5em;
color:black;
font-size:3em;
font-family:monospace;}
.wraper1{margin:150px;
width:70%;}
).img1
{max-width:500px;
float:left;
border:3px solid white;
border-radius:10px;
margin-right:15px;}
.text-box1{color:black;}
.text-box1 h2
{font-size:42px;}
.text-box1 p
{font-size:16px;}
.wraper2{margin:150px;
width:70%;}
.img2{height:300px;
width:520px;
float:right;
border:3px solid white;
border-radius:10px;
margin-left:15px;}.text-box2{color:black;}
.text-box2 h2{font-size:42px;}
.text-box2 p{font-size:16px;}
#para2{padding:20px;
font-size:1.4em;
color:black;
text-align:center;}
#home{color:white;}
#dash{text-align:center;
margin-top:10em;
font-size:3em;
color:black;
background-color:white;}
#story{text-align:center;
font-size:3em;
margin-top:10em;
color:black;
background-color:white;}
```

```

#report{text-align:center;
font-size:3em;
margin-top:10em;
color:black;
background-color:white;}
#more{font-family:verdana;
background-color:#7CB9EB;
position:relative;
font-size:1.2em;}
#myBtn { display: none;
position: fixed;
bottom: 20px;
right: 40px;
z-index: 90;
font-size: 18px;
border: none;
outline: none;
background-color: red;
color: white;
cursor: pointer;
padding: 15px;
border-radius: 25px;}
#myBtn:hover { background-color: green;}
#knowmore
{margin-top:15em;
margin-bottom:0em;
color:black;
background-color:white;
font-size:2em;
text-align:center;}
.link
{text-decoration:none;
color:blue;}
.link:hover
{
text-decoration:underline;
color:green;
}

```

## HTML FILE:

```

<html>
<head>
<title>
agriculture
</title>
<link rel="stylesheet" href="style1.css">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.4.0/css/all.min.css">
<link rel="icon" href="Wheat.SVG">
</head><body><button onclick="topFunction()" id="myBtn" title="Go to top"><i class="fa-solid fa-house-user"></i> Home</button>
<div class="container">
<p id="start1"></p>
<header class="header">
<a href="#" id="logo"><b>AGRICULTURE ANALYSIS</b><br></a>
<nav><div>
<a href="#start1"><i class="fa-solid fa-house-user"></i> Home</a>&nbsp;&nbsp;&nbsp;</div><div>
<a href="#dash"><i class="fa-solid fa-table-columns"></i> Dashboard</a>&nbsp;&nbsp;&nbsp;</div><div>
<a href="#story"><i class="fa-solid fa-file-waveform"></i></i> Story</a>&nbsp;&nbsp;&nbsp;</div><div>
<a href="#report"><i class="fa-solid fa-scroll"></i></i> Report</a>&nbsp;&nbsp;&nbsp;</div><div>
<a href="#about"><i class="fa-solid fa-address-card"></i> About</a>&nbsp;&nbsp;&nbsp;</div><div>
<a href="#knowmore"><i class="fa-solid fa-circle-info"></i> More</a>&nbsp;&nbsp;</div>
</div>
</header>

<div class="centered1"><h1><b>WELCOME</b><br><h1></div>
<div class="centered2"><h2>Cultivating Healthiness</h2></div>
<center class="centerimage"><a href="#about"></a></center>
</div>
<h1 id="about">ABOUT</h1>
<div class="wrapper1">

<div class="text-box1">
<h2>Employment Rate</h2><p id="para1" > The agricultural sector indeed plays a vital role in Indian economics, politics, and society. Agriculture is an important sector of Indian economy as it contributes about 17% to the total GDP and provides employment to around 58% of the population. The contribution of agriculture during the first two decades towards the gross domestic product ranged between 48 and 60%. In the year 2001-2002, this contribution declined to only about 26%.</p><br><br>
</div></div>
<div class="wrapper2">

<div class="text-box2">
<h2>Significance Of Agriculture </h2>
<p id="para1">In India at least two-thirds of the working population earn their living through agricultural works. In India other sectors have failed generate much of employment opportunity the growing working populations. Now E-technology is broadly understood to include the Internet and related information technologies regarding agriculture.</p>
</div>
</div>
<div class="wrapper1">


```

```

<div class='text-box1'>
<h2>Crop Patterns</h2>
<p id='para1'>A cropping system refers to the type and sequence of crops grown and practices used for growing them. It encompasses all cropping sequences practiced over space and time based on the available technologies of crop production. Cropping systems have been traditionally structured to maximize crop yields. Agriculture in India mainly depends on monsoon. If monsoon is good, the production will be more and if monsoon is less than average then the crops fail. </p>
</div>
</div>
</div>
<h1 id='dash'>DASHBOARD</h1>
<center>
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<h1 id='story'>STORY</h1>
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</center>
<h1 id='report'>REPORT</h1>
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<iframe src="https://us1.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2FAgriculture%2BAnalysis-Report&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode=embedded&action=run&format=HTML&prompt=false" width="1450" height="600" frameborder="0" gesture="media" allow="encrypted-media" allowfullscreen=""></iframe>
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<h1 id='knowmore'>MORE</h1>
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<tr>
<td>#8226; Team Leader</td>
<td> PARVAISHA BS</td>
</tr><tr>
<td>#8226; Team Member</td>
<td> BALA MURUGAN K</td>
</tr>
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<td>#8226; Dataset 2:</td>
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</tr>
</table>
</div>
<script>
// To Get the button
let mybutton = document.getElementById("myBtn");
// When the user scrolls down 20px from the top of the document, show the button
window.onscroll = function() {scrollFunction()};
function scrollFunction() {
if (document.body.scrollTop > 20 || document.documentElement.scrollTop > 20) {
mybutton.style.display = "block";
} else {
mybutton.style.display = "none";
}}// When the user clicks on the button, scroll to the top of the document
function topFunction() {
document.body.scrollTop = 0;
document.documentElement.scrollTop = 0;
}</script>
</body>
</html>

```