DRONE SERVICE APP FOR AGRICULTURE

A report submitted for the course of

Application Development_ Web Explore

II B. Tech I Semester

by

M.Navya - 2211IT010069

S.Priyanka - 2211IT010100

S.Manasa - 2211IT010104

V.Jyothika - 2211IT010111

Under the esteemed guidance of

Flora Ann Mathew

(Asst. professor)

Department of Information Technology

Malla Reddy Univeristy

Maisammaguda, Dulapally,

Hyderabad, Telangana 500100

www.mallareddyuniversity.ac.in

2023-24

MALLA REDDY UNIVERSITY

(Telangana State Private Universities Act No.13 of 2020 and G.O.Ms.No.14, Higher Education (UE) Department)

INFORMATION TECHNOLOGY

CERTIFICATE

This is to certify that this bonafide record of the Application Development entitled **DRONE SERVICE APP FOR AGRICULTURE** submitted by **M.NAVYA(2211IT010069), S.PRIYANKA (2211IT010100), S.MANASA (2211IT010104), V.JYOTHIKA (2211IT010111)** of **II** year **I** semester to the Malla Reddy University, Hyderabad. This bonafide record of work carried out by us under the guidance of our supervision. The contents of this report, in full or in parts, have not been submitted to any other Organization for the award of any Degree.

Internal Guide:

Name: Flora Ann

Asst. professor

Head of the Department

Dr.GS Naveen Kumar

External Examiner

Date:

ABSTRACT

The utilization of Unmanned Aerial Vehicles (UAVs), commonly known as drones, has gained substantial attention in the agriculture sector over the past decade . Agriculture drones have emerged as powerful tools for precision agriculture, enabling farmers to monitor and manage their fields with unprecedent levels of details and efficiency. The drone helps in different types of agriculture fields like sprinkling the pesticides, urea and helps in monitoring the growth of the crop. If we spray pesticides manually it can affect the human who is spraying the pesticides. So with drone application we can able to spray pesticides and other liquids. With the use of drones no crop damage occurs and it will complete in less span of time. They are safe to use and are more useful in agriculture fields. Using this application in agriculture fields provides better cultivation, good crop health. This application aims to reduce the ill effects of pesticides or other chemicals on human beings.

CONTENTS

Certificate		I
Abstract		II
Contents		III
List of Figures		IV
Abbreviations		V
Chapter 1	Introduction	1,2
Chapter 2	Review of Relevant Literature	3
Chapter 3	Methodology	4-5
Chapter 4	Results and Discussions	6-11
Chapter 5	Conclusions and Future Scope of Study	12 -13
References		14
Appendix A: Sample Source Code		15-28

LIST OF FIGURES

Figure	Title	Page
1.1	Issues In Agriculture	5
1.2	Login page	6
1.3	Home page	7
1.4	services	8
1.41	services	8
1.42	services	9
1.43	services	9
1.44	services	10
1.5	Agri drones	10
1.6	Uses	11
1.7	Contact	11

LIST OF ABBREVIATIONS

DSA	-	DRONE SERVICE APP
ASA	-	AGRICULTURAL SERVICE APP
FSMA	-	DRONE AGRICULTURE APP

Chapter 1 Introduction

The use of drones in almost every sector of the economy is growing fast, but drone usage in the agricultural industry is booming. According to some reports, the agricultural drone market is expected to grow from a $1.2 billion(USD) industry in 2019 to $4.8 billion in 2024. From scouting to security, drone use will become more ubiquitous on large and small scale farms in a few short years. The information gathered by drones on farms is often used to better inform agronomic decisions and is part of a system generally referred to as 'precision agriculture'. Drones using 'regular' cameras are also used to monitor crop health.

The drone service app for agriculture is an innovative solution that leverages the power of drones to enhance farming practices. This app assists farmers by providing them with a comprehensive range of services to optimize productivity, efficiency, and yield in their agricultural operations.

With the help of the drone service app, farmers can easily schedule and deploy drones for various tasks such as crop monitoring, field inspections, irrigation management, and pest control. These drones are equipped with high-resolution cameras and sensors that capture detailed images and data, offering valuable insights into crop health, growth patterns, soil conditions, and pest infestations.

By utilizing this app, farmers can obtain real-time, accurate information about their crops, enabling them to make data-driven decisions for irrigation, fertilization, and pesticide application. This improves resource management, reduces costs, and minimizes environmental impact. Additionally, the app provides intelligent data analytics and predictive algorithms that help farmers predict crop yields, detect disease outbreaks, and optimize planting patterns.

operations. Framers can easily access and visualize the collected data through intuitive interfaces and customizable dashboards on their smartphones or computers.

Overall, the drone service app for agriculture empowers farmers with cutting-edge technology, enabling them to maximize productivity, streamline operations, and make informed decisions for sustainable and profitable framing.

Chapter 2 Review of Relevant Literature

The use of drone technology in agriculture has gained significant attention in recent years due to its potential to enhance various aspects of farming operations. This literature review aims to explore the existing studies and academic articles related to drone service apps for agriculture. The review highlights the key findings, methodologies used, and their implications for the agricultural sector.

1.Integration of Drones in Agriculture:

Authors (Duan et al., 2018; Basioura et al., 2020) discuss the integration of drones in agriculture and its potential benefits, including crop health monitoring, precision spraying, and yield estimation. The studies emphasize the role of drone service apps in enabling farmers to operate drones efficiently and effectively in carrying out various agricultural tasks.

2.Crop Monitoring and Disease Detection:

Several studies (Zhang et al., 2019; Tian et al., 2021) focus on the use of drone service apps for crop monitoring and disease detection. They highlight the ability of drone-mounted sensors and cameras to capture high-resolution images of crops. These images can then be processed using image analysis algorithms to identify diseases, nutrient deficiencies, and other issues accurately.

3.Precision Agriculture and Yield Estimation:

Studies (Andriotis et al., 2017; Dhakal et al., 2019) examine the application of drone service apps in precision agriculture, particularly for yield estimation. Utilizing drone-collected data, such as multispectral imagery and thermal images, these apps can provide real-time information on crop health and yield potential, aiding farmers in decision-making .

CHAPTER 3: METHODOLOGY

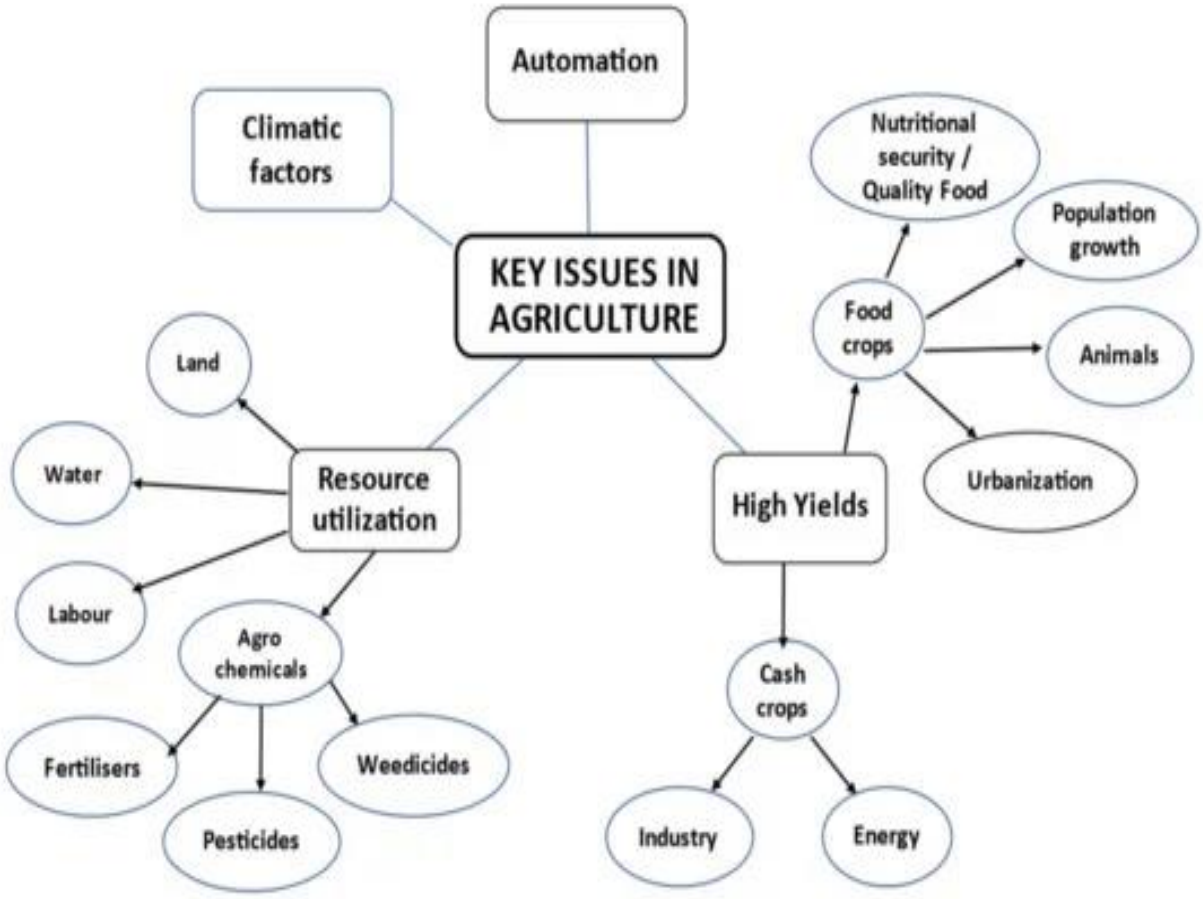
Market Research: Understand the needs and challenges of framers regarding crop monitoring, pest control, irrigation, etc. Identify the pain points that drones can address effectively.

Define Objectives: Clearly outline what the app aims to achieve-whether it's crop health monitoring, spraying pesticides, assessing soil conditions, etc.

Technology Selection: Choose the right drone hardware and software that aligns with the app's objectives. Consider factors like drone capabilities, camera resolution, sensors, and battery life.

Backend Development: Build a robust backend to handle data processing, storage, and communication between drones and the app. Consider cloud integration for data storage and analysis.

Testing: conduct through testing to ensure the app functions seamlessly across different devices, handles varying network conditions, and delivers accurate data.



ISSUES IN AGRICULTURE

fig-1.1

CHAPTER 4: RESULTS AND DISCUSSIONS:

The implementation of drone service app in agriculture has proved to be highly beneficial. The app allows farmers to easily monitor their crops and make informed decisions based on real-time data. Drones equipped with advanced imaging technology can efficiently survey large areas of farmland, identifying potential issues such as crop diseases, nutrient deficiencies, or water stress.

By using the app, farmers can accurately assess the health of their crops and take timely actions to mitigate any problems. This not only helps in increasing crop yield and quality but also reduces the need for excessive use of pesticides and fertilizers, resulting in a more sustainable and environmentally-friendly farming practice**.**

Fig 1.2 Login page

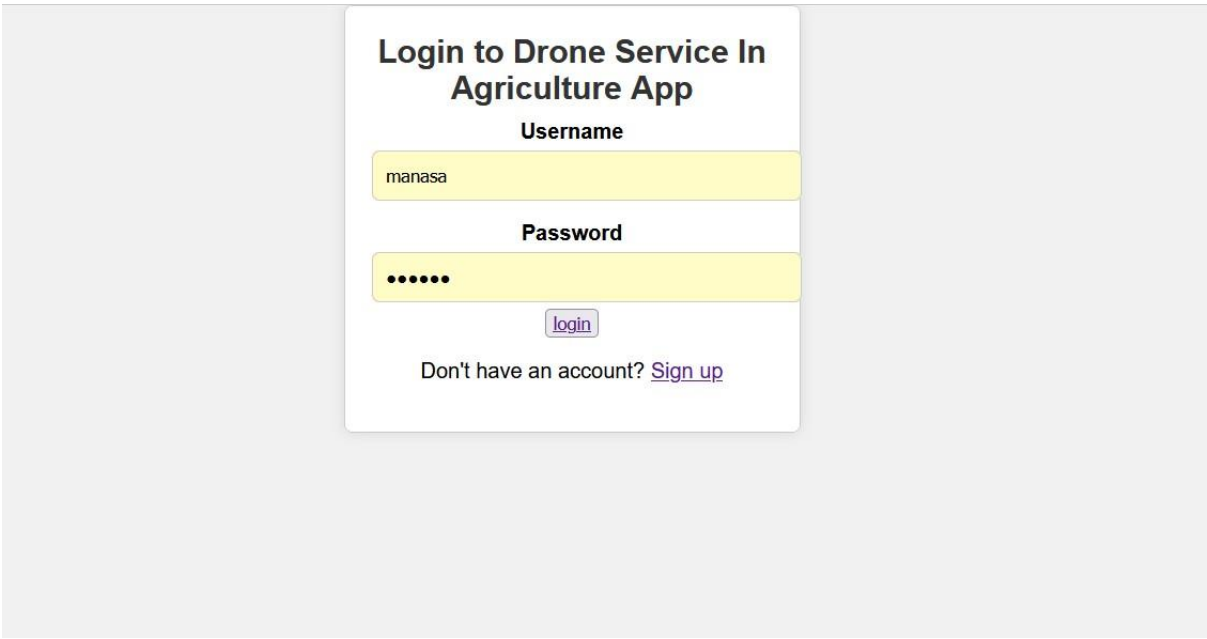


Fig 1.3 Home page

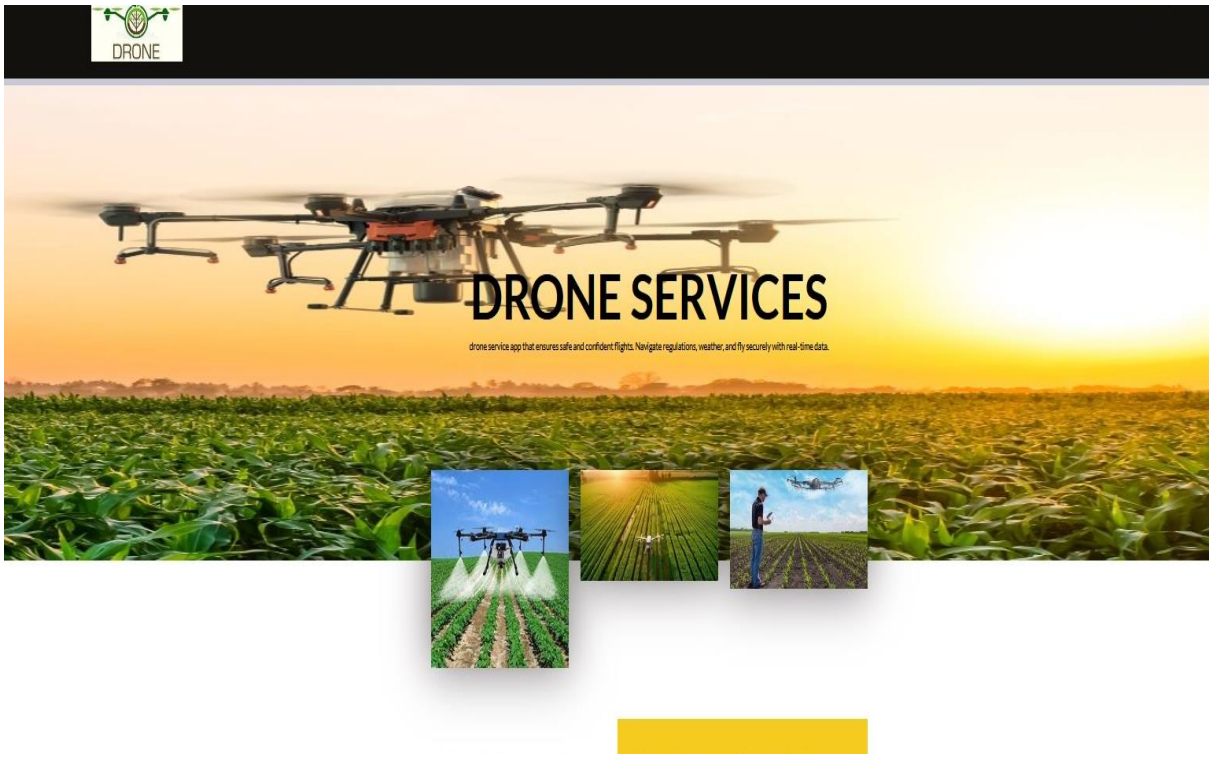


Fig 1.4 services

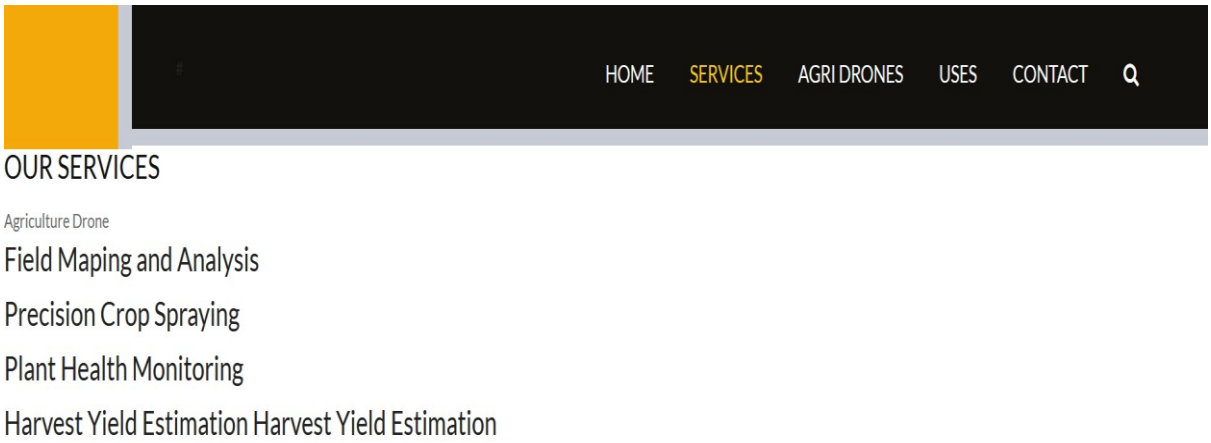


Fig 1.41 Services

Field Mapping and Analysis

Field mapping and analysis using drone services in agriculture have become increasingly popular due to their ability to provide high-resolution, real-time data that can help farmers make informed decisions. Here's an overview of the key aspects of field mapping and analysis in drone services for agriculture:

Crop Health Assessment:

Identifying signs of diseases, pests, and stress in crops through drone-captured images.

Soil analysis:

Drones equipped with advanced sensors can provide real-time and precise analysis of soil conditions, helping farmers make informed decisions about fertilizer and other inputs.

Pest and disease detection:

Drones can help identify pests and diseases in crops, allowing farmers to take timely action and minimize losses.

Time-saving and labor-saving:

Drones can save time and labor by reducing the need for manual inspections and monitoring of crops.

Improved crop yield:

By enabling farmers to monitor and manage their crops more effectively, drones can

help increase crop yield and improve overall agricultural productivity.

Early detection of crop issues:

Drones equipped with multispectral cameras can identify problems early on,

Fig 1.42 services

Precision Crop Spraying

Harvest Yield Estimation Harvest Yield EstimationPrecision crop spraying using drone services in agriculture involves the targeted application of pesticides, fertilizers, or other agricultural inputs to specific areas of a field, optimizing resource use and minimizing environmental impact. Here are key aspects of precision crop spraying with drones:

Efficient and accurate:

Drones can cover large areas of land quickly and apply chemicals with high precision, reducing waste and increasing efficiency.

Cost-effective:

Precision crop spraying can help reduce input costs and increase yields by identifying areas of concern and directing treatments more efficiently.

Safe and environmentally friendly:

Precision crop spraying can reduce the risk of exposure to harmful chemicals for farmers and workers, as well as minimize the impact on the environment.

Integrated with other technologies:

Precision crop spraying can be integrated with other technologies, such as mapping and data analysis, to provide a comprehensive view of crop health and management.

Fig 1.43 sevices

Plant Health Monitoring

Plant health monitoring using drone services in agriculture involves the use of unmanned aerial vehicles equipped with various sensors to assess the condition of crops. Monitoring plant health is crucial for early detection of diseases, nutrient deficiencies, and other stress factors, enabling farmers to take timely and targeted actions. Here are key aspects of plant health monitoring with drones:

Early detection of crop issues:

Drones equipped with multispectral cameras can identify problems such as diseases, pests, and nutrient deficiencies early on, allowing for timely intervention and treatment.

Soil health analysis:

Drones can collect diverse soil samples across fields, helping farmers analyze soil fertility, pH levels, and moisture content, and make informed decisions regarding nutrient management and soil conditioning.

Irrigation monitoring and planning:

Drones can help farmers monitor irrigation systems and plan for optimal water distribution, leading to healthier and more productive crops.

Fig 1.44 Services

Harvest Yield Estimation Harvest Yield Estimation

Drones equipped with advanced sensors and cameras can collect a wealth of information, including soil quality, plant health, and weather conditions, enabling the generation of detailed maps and the prediction of harvest yields. By leveraging drone technology, farmers can improve efficiency, reduce costs, and ultimately increase crop yield and quality.

Drone services in agriculture can provide accurate yield estimation and crop health monitoring. Equinox Drones and Agremo offer drone-powered solutions for crop counting, crop emergence analysis, irrigation monitoring, and plant growth monitoring. Agremo's AI analytics can provide precise yield estimation using stand count data obtained before harvest. Drones equipped with multispectral sensors can provide detailed information on crop nutrient status, weed, pests, or disease stress. Computer vision algorithms can be trained to detect disease symptoms and distinguish individual crop phenotypes in multi-crop agriculture. The use of drones and AI analytics can significantly increase crop yields and reduce costs for farmers.

Agriculture

Harvest yield estimation using drone services in agriculture has become an increasingly popular and effective technique. Drones equipped with advanced sensors and imaging technologie can provide farmers with valuable insights into the health and productivity of their crops.

Yield Prediction:

By analyzing the collected data over time, farmers can make informed predictions about the potential yield of their crops.

Machine learning algorithms may be employed to analyze historical data and make more accurate predictions.

Crop Monitoring Throughout the Growing Season:

Drones enable farmers to monitor crops at different growth stages, allowing for timely interventions. For example, monitoring plant emergence, tracking crop development, and assessing flowering and fruiting stages can provide valuable insights into the overall health and potential yield of the crops.

Fig 1.5 Agri Drones

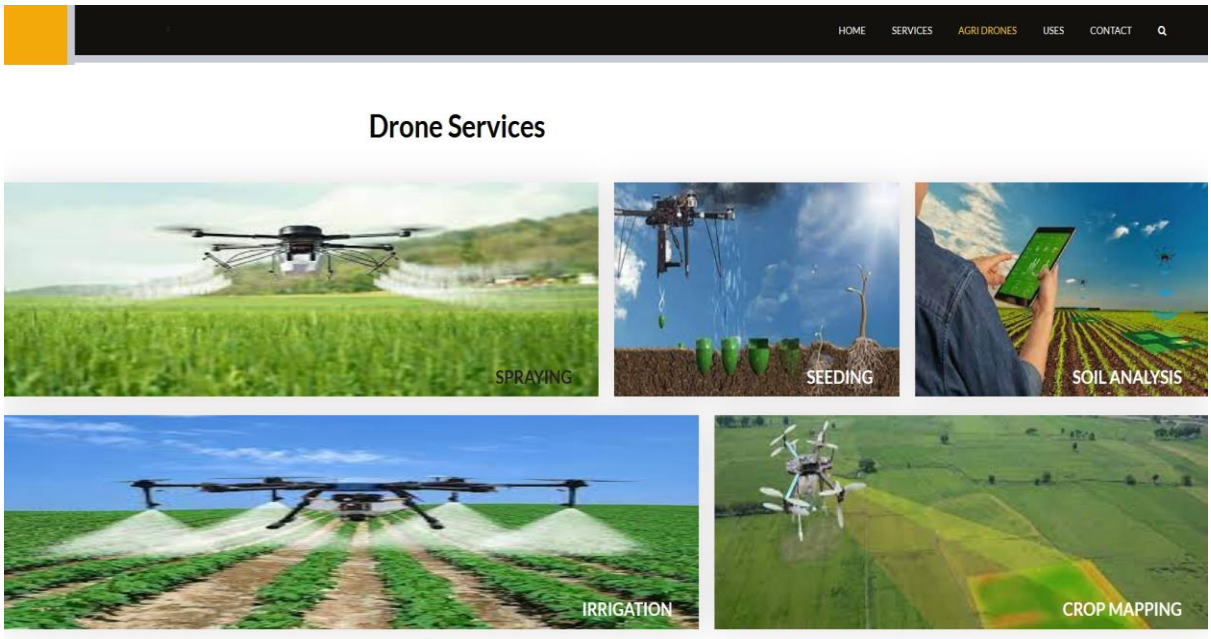


Fig 1.6 Uses

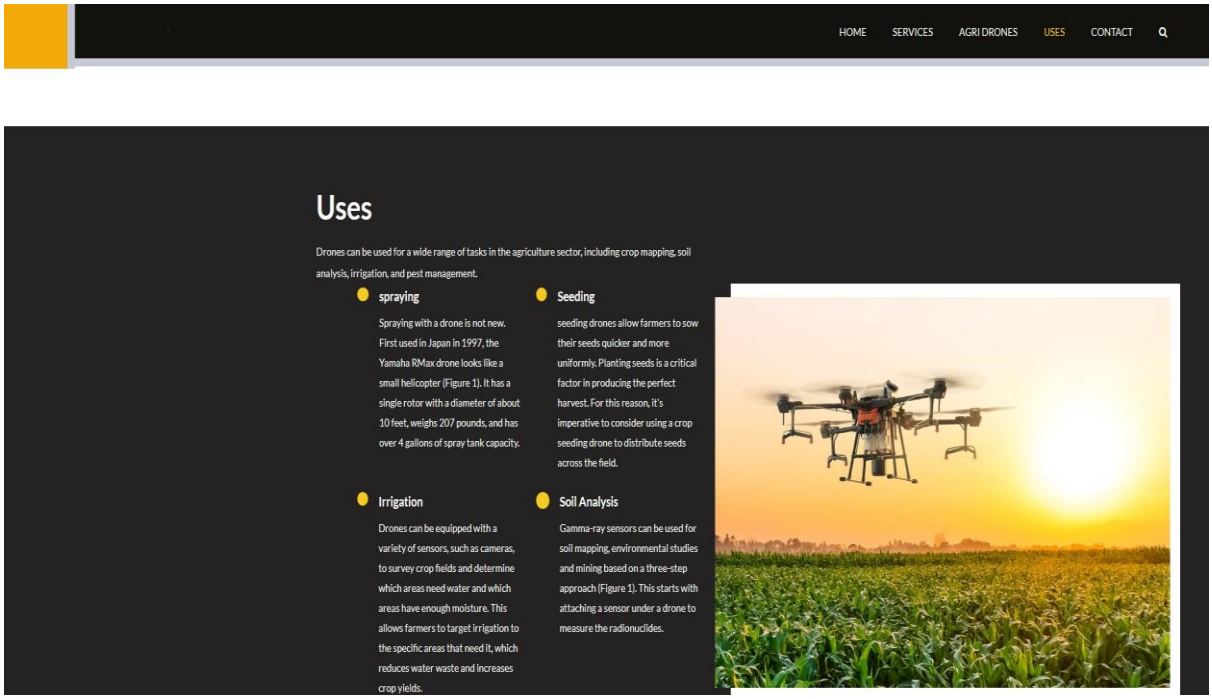
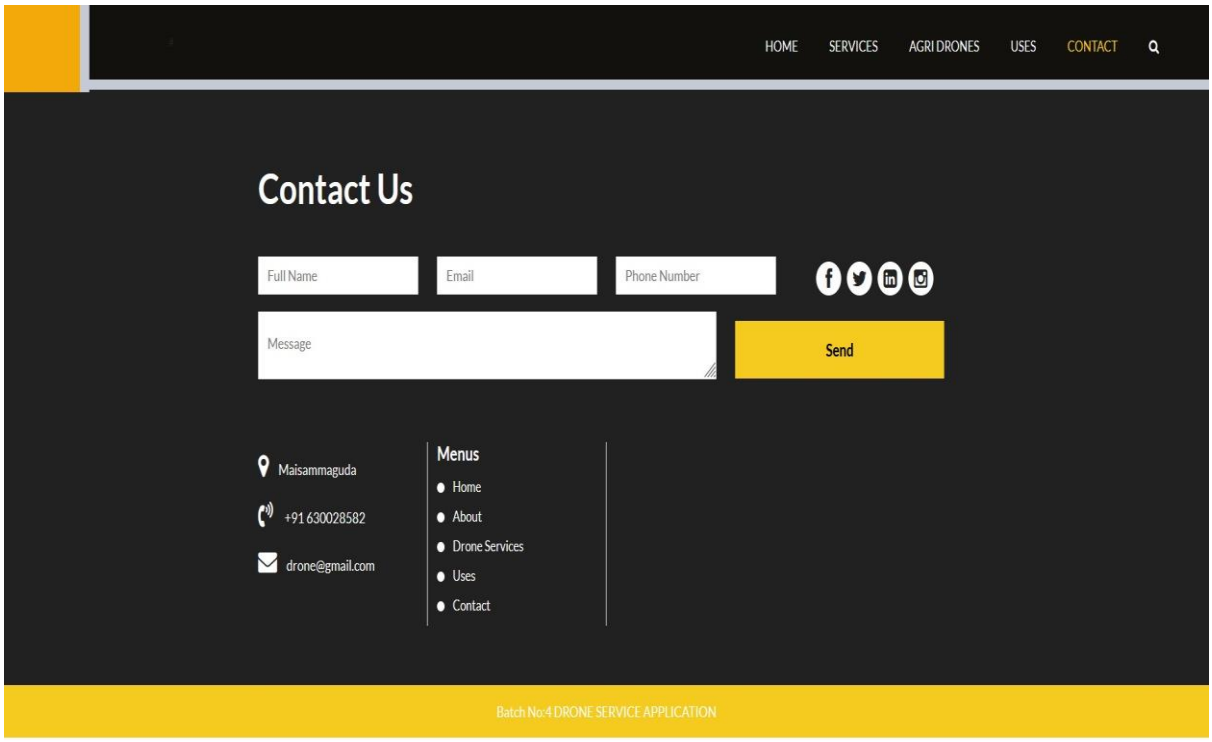


Fig 1.7 contact



CHAPTER 5: CONCLUSIONS AND FUTURE SCOPE OF STUDY

CONCLUSION:

In conclusion, the drone service app for agriculture holds great potential in revolutionizing the industry. By leveraging advanced technologies, such as drones and data analytics, it offers numerous benefits to farmers, including increased efficiency and productivity, cost-savings, and improved crop monitoring and management.The app allows farmers to easily deploy drones for various agricultural tasks, such as crop monitoring, pest detection, and irrigation management. This enables them to gain real-time insights into their fields, identify issues early on, and make data-driven decisions to improve crop yields.Furthermore, the use of drones eliminates the need for manual labor in certain tasks, such as crop scouting and mapping. This not only reduces labor costs but also minimizes the risk of human error, resulting in accurate and reliable data collection.The app also facilitates the integration of data analytics, as it collects and analyzes large amounts of data gathered by drones. This helps farmers to identify trends, patterns, and correlations that can lead to better crop management and resource allocation. By optimizing inputs, such as water, fertilizers, and pesticides, farmers can reduce waste and environmental impact.

Additionally, the app provides farmers with access to historical data, allowing them to track and compare their crop performance over time. This enables them to assess the effectiveness of different techniques, treatments, or changes in their farming practices.

FUTURE SCOPE OF STUDY :

The future scope of studying a drone service app for agriculture is quite promising. Here are some potential areas of exploration. Drones equipped with sensors and cameras can provide real-time data on crop health, growth patterns, and soil conditions. The future scope involves developing advanced algorithms and machine learning techniques to analyze this data and provide actionable insights to farmers for precise decision-making. Drones have the ability to

fly over large areas of farmland and capture high-resolution images. The future scope involves studying and developing image recognition and analysis techniques to identify pests, diseases, or nutrient deficiencies in crops, helping farmers detect and respond to issues early on. Drones can be equipped with sprayers and irrigation systems to apply fertilizers, pesticides, and water to crops with precision. The future scope involves researching and implementing automated systems for optimal application rates, considering factors like wind direction, crop density, and soil moisture levels. In the face of declining bee populations, drone technology shows promise in assisting with pollination of crops.

REFERENCES:

One possible reference for a drone service app in agriculture is a case study conducted by Intel and Yara International. Intel is a technology company that provides drone technology and Yara International is a Norwegian agricultural firm. They collaborated to develop an innovative digital farming platform called "The Yara RPA (Robotics and Process Automation) Digital Farming Solution."

The Yara RPA Digital Farming Solution utilizes Intel's Falcon 8+ drones equipped with advanced imaging sensors and artificial intelligence algorithms to collect and analyze field data. The drones can capture high-resolution images, multispectral data, and generate detailed field maps.

Farmers can then use the mobile app associated with the solution to access the collected data, monitor crop health, identify crop deficiencies, and make precise decisions regarding fertilization or other required interventions. Real-time data and analysis help farmers optimize crop yields, reduce resource inputs, and minimize environmental impact.

The case study highlights how drone technology and data-driven insights contribute to more sustainable and efficient farming practices. The app provided with the solution improves farmer decision-making and helps them understand their fields in unprecedented detail.

You can find more details about this reference by searching for "Intel and Yara International drone service app in agriculture" or similar keywords.

Appendix A: Sample Source Code

Login page:

```
<!DOCTYPE html>
<html>
<head>
    <title>Drone Service In Agriculture App - Login</title>
    <link rel="stylesheet" href="login.css">


</head>
<body>
    <div class="login-container">
        <h2>Login to Drone Service In Agriculture App</h2>
        <form action="login.html" method="POST">
            <label for="username">Username</label>
            <input type="text" id="username" name="username" required>

            <label for="password">Password</label>
            <input type="password" id="password" name="password" required>

           <button class="butt"><a href="index.html">login</a></button>
        </form>

        <p>Don't have an account? <a class="anc" href="signup.html">Sign
up</a></p>
    </div>
</body>
</html>
```

Login.css

```
body {
    font-family: Arial, sans-serif;
    background-color: #f1f1f1;
}

.login-container {
    background-color: #fff;
    width: 300px;
    margin: 0 auto;
    padding: 20px;
    border: 1px solid #ccc;
    border-radius: 5px;
    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
    text-align: center;
}

h2 {
    margin: 0;
    color: #333;
}

label {
    display: block;
    margin-top: 10px;
    font-weight: bold;
}
input {
    width: 100%;
    padding: 10px;
    margin: 5px 0;
    border: 1px solid #ccc;
    border-radius: 5px;
    text-align: center;
}
```

```
input[type="submit"] {
    background-color: #4CAF50;
    color: white;
    border: none;
    border-radius: 5px;
    padding: 10px 15px;
    cursor: pointer;
}

.butt{
    background-color: #45a049;
    color:#fff
}

.anc {
    text-decoration: none;
    color: #0073e6;
}
a{
    color:white;
}
```

Source Code:

```
<!DOCTYPE html>
<html lang="en">
   <head>
      <meta charset="utf-8">
      <meta http-equiv="X-UA-Compatible" content="IE=edge">
      <meta name="viewport" content="width=device-width, initial-scale=1">
      <meta name="viewport" content="initial-scale=1, maximum-scale=1">

      <title>AGRICULTURE DRONE SERVICE</title>
      <meta name="keywords" content="">
      <meta name="description" content="">
      <meta name="author" content="">
      <link rel="stylesheet" href="css/bootstrap.min.css">
      <link rel="stylesheet" href="css/style.css">
      <link rel="stylesheet" href="css/responsive.css">
      <link rel="icon" href="images/fevicon.png" type="image/gif" />
      <link rel="stylesheet" href="css/jquery.mCustomScrollbar.min.css">
      <link rel="stylesheet" href="https://netdna.bootstrapcdn.com/font-
awesome/4.0.3/css/font-awesome.css">
      <link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/fancybox/2.1.5/jquery.fancybox.mi
n.css" media="screen">
   </head>
   <!-- body -->
   <body class="main-layout">
      <!-- loader  -->
      <div class="loader_bg">
         <div class="loader"><img src="images/loading.gif" alt="#" /></div>
      </div>
      <!-- end loader -->
      <!-- header -->
      <header>
```

```
<!-- header inner -->
         <div class="header">
            <div class="container-fluid">
               <div class="row">
                  <div class="col-xl-3 col-lg-3 col-md-3 col-sm-3 col
logo_section">
                     <div class="full">
                        <div class="center-desk">
                           <div class="logo">
                              <a href="index.html"><img
src="images/logo2.jpeg" alt="#" /></a>
                           </div>
                        </div>
                     </div>
                  </div>
                  <div class="col-xl-9 col-lg-9 col-md-9 col-sm-9">
                     <nav class="navigation navbar navbar-expand-md navbar-
dark ">
                        <button class="navbar-toggler" type="button" data-
toggle="collapse" data-target="#navbarsExample04" aria-
controls="navbarsExample04" aria-expanded="false" aria-label="Toggle
navigation">
                        <span class="navbar-toggler-icon"></span>
                        </button>
<div class="collapse navbar-collapse" id="navbarsExample04">
                           <ul class="navbar-nav mr-auto">
                              <li class="nav-item active">
                                 <a class="nav-link" href="index.html">
Home  </a>
                              </li>
                              <li class="nav-item">
                                 <a class="nav-link"
href="Services.html">services</a>
                              </li>
                              <li class="nav-item">
                                 <a class="nav-link" href="Agri
Drones.html">Agri Drones </a>
                              </li>
```

```
</li>
                              <li class="nav-item">
                                 <a class="nav-link"
href="Services.html">services</a>
                              </li>
                              <li class="nav-item">
                                 <a class="nav-link" href="Agri
Drones.html">Agri Drones </a>
                              </li>
                              <li class="nav-item">
                                 <a class="nav-link" href="Uses.html">Uses</a>
                              </li>
                              <li class="nav-item">
                                 <a class="nav-link"
href="contact.html">Contact</a>
                              </li>
                              <li class="nav-item d_none">
                                 <a class="nav-link" href="#"><i class="fa fa-
search" aria-hidden="true"></i></a>
                              </li>
                              <li class=" d_none get_btn">

                              </li>
                           </ul>
                        </div>
                     </nav>
                  </div>
               </div>
            </div>
 </div>
      </header>
```

```
<section class="banner_main">
         <div class="container">
            <div class="row">
               <div class="col-md-12 ">
                  <div class="text-bg">
                     <h1>DRONE SERVICES</h1>
                     <p>drone service app that ensures safe and confident
flights. Navigate regulations, weather, and fly securely with real-time
data.</p>
                  </div>
               </div>
            </div>
         </div>
      </section>
<div class="three_box">
         <div class="container">
            <div class="row">
               <div class="col-md-4">
                  <div class="box_text">
                     <figure><img src="images/spry.jpeg" alt="#"/></figure>
                  </div>
               </div>
               <div class="col-md-4">
                  <div class="box_text">
                     <figure><img src="images/img2.jpeg" alt="#"/></figure>
                  </div>
               </div>
               <div class="col-md-4">
                  <div class="box_text">
                     <figure><img src="images/img3.jpeg" alt="#"/></figure>
                  </div>
               </div>
            </div>
         </div>
      </div>
<div  class="hottest">
         <div class="container">
            <div class="row d_flex">
               <div class="col-md-5">
                  <div class="titlepage">
                     <h2>Drone Service In Agriculture <br></h2>
                  </div>
               </div>
```

```
div class="col-md-7">
                  <div class="hottest_box">
                     <p>Drones serve as indispensable tools in various key
facets of farming, encompassing irrigation monitoring, crop health assessment,
damage mitigation, field soil analysis, precise planting, and efficient
agricultural spraying. </p>
                  </div>
               </div>
            </div>
         </div>
      </div>
      </div>
      <!-- end hottest -->
      <!-- choose  section -->
      <div class="choose ">
         <div class="container">
            <div class="row">
               <div class="col-md-8">
                  <div class="titlepage">
                     <h2>Uses</h2>
                     <p>Drones can be used for a wide range of tasks in the
agriculture sector, including crop mapping, soil analysis, irrigation, and
pest management. </p>
                  </div>
               </div>
            </div>
         </div>
         <div class="container-fluid">
            <div class="row d_flex">
               <div class="col-xl-7 col-lg-7 col-md-12 col-sm-12">
                  <div class="padding_with">
                     <div class="row">
                        <div class="col-md-6 padding_bottom">
                           <div class="choose_box">
                              <i><img src="images/icon1.png" alt="#"/></i>
                              <div class="choose_text">
                                 <h3>spraying</h3>
                                 <p>Spraying with a drone is not new. First
used in Japan in 1997, the Yamaha RMax drone looks like a small helicopter
(Figure 1). It has a single rotor with a diameter of about 10 feet, weighs 207
pounds, and has over 4 gallons of spray tank capacity. </p>
                              </div>
                           </div>
                        </div>
```

```
<div class="col-md-6 padding_bottom">
                           <div class="choose_box">
                              <i><img src="images/icon2.png" alt="#"/></i>
                              <div class="choose_text">
                                 <h3>Seeding</h3>
                                 <p>seeding drones allow farmers to sow their
seeds quicker and more uniformly. Planting seeds is a critical factor in
producing the perfect harvest. For this reason, it's imperative to consider
using a crop seeding drone to distribute seeds across the field. </p>
                              </div>
                           </div>
                        </div>
                        <div class="col-md-6 padding_bottom2">
                           <div class="choose_box">
                              <i><img src="images/icon3.png" alt="#"/></i>
                              <div class="choose_text">
                                 <h3>Irrigation</h3>
                                 <p>Drones can be equipped with a variety of
sensors, such as cameras, to survey crop fields and determine which areas need
water and which areas have enough moisture. This allows farmers to target
irrigation to the specific areas that need it, which reduces water waste and
increases crop yields.</p>
                              </div>
                           </div>
                        </div>
                        <div class="col-md-6">
                           <div class="choose_box">
                              <i><img src="images/icon4.png" alt="#"/></i>
                              <div class="choose_text">
                                 <h3>Soil Analysis</h3>
                                 <p>Gamma-ray sensors can be used for soil
mapping, environmental studies and mining based on a three-step approach
(Figure 1). This starts with attaching a sensor under a drone to measure the
radionuclides.</p>
                              </div>
                           </div>
                        </div>
                     </div>
                  </div>
               </div>
               <div class="col-xl-5 col-lg-5 col-md-12 col-sm-12">
                  <div class="choose_img">
                     <figure><img src="images/drone.jpg" alt="#"/></figure>
```

```
      </div>
               </div>
            </div>
         </div>
         <div class="container">
            <div class="row">
               <div class="col-md-5">
                  <a class="read_more" href="">Read More</a>
               </div>
            </div>
         </div>
      </div>
      </div>
      <!-- end choose  section -->
      <!-- product  section -->
      <div class="product">
         <div class="container">
            <div class="row">
               <div class="col-md-6">
                  <div class="titlepage">
                     <h2>Drone Services</h2>
                  </div>
               </div>
            </div>
         </div>
         <div class="container-fluid">
            <div class="row">
               <div class="col-xl-6 col-lg-6 col-md-6 col-sm-12
padding_left0">
                  <div class="product_box">
                     <figure><img src="images/pic 1.jpeg" alt="#"/></figure>
                     <h3 class="black">Spraying</h3>
                  </div>
               </div>
<div class="col-xl-3 col-lg-3 col-md-3 col-sm-12">
                  <div class="product_box">
                     <figure><img src="images/pic 2.jpeg" alt="#"/></figure>
                     <h3 >Seeding</h3>
                  </div>
 </div>
               <div class="col-xl-3 col-lg-3 col-md-3 col-sm-12
padding_right0">
                  <div class="product_box">
                     <figure><img src="images/pic 3.jpeg" alt="#"/></figure>
                     <h3>Soil Analysis</h3>
                  </div>
```

```
</div>
               <div class="col-xl-7 col-lg-7 col-md-7 col-sm-12
padding_left0">
                  <div class="product_box">
                     <figure><img src="images/pic 4.jpeg" alt="#"/></figure>
                     <h3>Irrigation</h3>
                  </div>
               </div>
               <div class="col-xl-5 col-lg-5 col-md-5 col-sm-12
padding_right0">
                  <div class="product_box">
                     <figure><img src="images/pic 5.jpeg" alt="#"/></figure>
                     <h3>Crop mapping</h3>
                  </div>
               </div>
            </div>
         </div>
      </div>
      <html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>


    <section>
        <h1>OUR SERVICES</h1>
        <img src="Agri.jpg" alt="Agriculture Drone" width="750">
    </section>
    <nav>
        <p> <a href="index3.html"><h1>Field Maping and Analysis</h1></a></p>
        <p> <a href="index4.html"><h1>Precision Crop Spraying</h1></a></p>
        <p> <a href="index5.html"><h1>Plant Health Monitoring</h1></a></p>
        <p> <a href="index6.html"><h1>Harvest Yield Estimation Harvest Yield
Estimation</h1></a></p>
```

```
 </nav>
</body>
</html>
      <footer id="contact">
         <div class="footer">
            <div class="container">
               <div class="row">
                  <div class="col-md-4">
                     <div class="titlepage">
                        <h2>Contact Us</h2>
                     </div>
                  </div>
                  <div class="col-md-12">
                     <form id="request" class="main_form">
                        <div class="row">
                           <div class="col-md-3 ">
                              <input class="contactus" placeholder="Full Name"
type="type" name="Full Name">
                           </div>
                           <div class="col-md-3">
                              <input class="contactus" placeholder="Email"
type="type" name="Email">
                           </div>
                           <div class="col-md-3">
                              <input class="contactus" placeholder="Phone
Number" type="type" name="Phone Number">
                           </div>
                           <div class="col-xl-3 col-lg-3 col-md-3 col-sm-12">
                              <ul class="social_icon">
                                 <li><a href="#"><i class="fa fa-facebook"
aria-hidden="true"></i></a></li>
                                 <li><a href="#"><i class="fa fa-twitter"
aria-hidden="true"></i></a></li>
                                 <li><a href="#"><i class="fa fa-linkedin-
square" aria-hidden="true"></i></a></li>
                                 <li><a href="#"><i class="fa fa-instagram"
aria-hidden="true"></i></a></li>
                              </ul>
                           </div>
                           <div class="col-md-8">
                              <textarea class="contactus1"
placeholder="Message" type="type" Message="Name">Message </textarea>
                           </div>
                           <div class="col-xl-4 col-lg-4 col-md-4 col-sm-12">
```

```
 <button class="send_btn">Send</button>
                           </div>
                        </div>
                     </form>
                  </div>
                  <div class="col-md-3 border_right">
                     <ul class="location_icon">
                        <li><a href="#"><i class="fa fa-map-marker" aria-
hidden="true"></i></a> Locatins</li>
                        <li><a href="#"><i class="fa fa-volume-control-phone"
aria-hidden="true"></i></a> +71 9087654321</li>
                        <li><a href="#"><i class="fa fa-envelope" aria-
hidden="true"></i></a>demo@gmail.com</li>
                     </ul>
                  </div>
                  <div class="col-md-3 border_right">
                     <h3>Useful Link</h3>
                     <ul class="link">
                        <li><a href="#">humour, or </a></li>
                        <li><a href="#">randomised words </a> </li>
                        <li><a href="#">which don't look </a></li>
                        <li><a href="#">even slightly  </a> </li>
                        <li><a href="#">believable. If   </a></li>
                     </ul>
                  </div>
                  <div class="col-md-3 border_right">
                     <h3>Menus</h3>
                     <ul class="link">
<li><a href="index.html">Home</a></li>
<li><a
href="about.html">About</a></li>

<li><a href="products.html">Products</a></li>
<li><a href="blog.html">Blog</a></li>
<li><a href="contact.html">Contact</a></li>
                     </ul>
</div>
                  <div class="col-md-3">
                     <form class="bottom_form">
                        <h3>Newsletter</h3>
                        <input class="enter" placeholder="Enter your email"
type="text" name="Enter your email">
                        <button class="sub_btn">subscribe</button>
                     </form>
```

```
 </div>
               </div>
            </div>
            <div class="copyright">
               <div class="container">
                  <div class="row">
                     <div class="col-md-12">
                        <p>Copyright 2019 All Right Reserved By <a
href="https://html.design/"> Free  html Templates</a></p>
                     </div>
                  </div>
               </div>
            </div>
         </div>
      </footer>
      <!-- end footer -->
      <!-- Javascript files-->
      <script src="js/jquery.min.js"></script>
      <script src="js/popper.min.js"></script>
      <script src="js/bootstrap.bundle.min.js"></script>
      <script src="js/jquery-3.0.0.min.js"></script>
      <!-- sidebar -->
      <script src="js/jquery.mCustomScrollbar.concat.min.js"></script>
      <script src="js/custom.js"></script>
   </body>
</html>
```