



YieldUp USER GUIDE

INTRODUCTION

YieldUp is a web application that can be used by farmers to detect crop diseases mainly in cassava, beans, and coffee by taking pictures of plant leaves.

If a plant(s) is/are found to have a disease, the App recommends necessary steps to take such as getting the pesticides and agro-chemicals, connecting with an agricultural officer for expert guidance, and also linkup with fellow farmers.

The intention is to realize high yields and boost the farmers' livelihoods. This solution is aimed at addressing the UN Sustainable Development Goal of **No Hunger**

Like applications have been developed to ensure that people are connected across the world, apps such as facebook, whatsapp, signal, telegram that have brought people together, YieldUp intends to create a community of farmers across that world with the bid to curb down challenges faced by farmers across the globe.

Problems can be solved through networking among farmers which helps them to get to know each other or even being able to share ideas and get information related to farming practices .

With this platform agricultural challenges are aired out by different farmers and with the solutions provided to farmers from colleagues crop yields can be boosted and thus hunger issues will be solved across the world because food is available in abundance.

YieldUp is built with a computer vision model that is able to do image

processing and be able to diagnose crop disease. For now the system is limited to cassava and beans which are common food crops grown in Africa and mostly consumed by people of Africa

TECHNOLOGIES USED IN THE APPLICATION

YieldUp is a web based application built using the python programming languages and frameworks of flask and Django, javascript, HTML and css , tensorflow.

System Access

Users can only access the system after creating a user account,agreeing to the terms and conditions and then logging into the system using the username and password they filled in in during the registration process

System Users

Administrators

Specialists/Doctors

Farmers

Roles.

The application covers three categories of users that is, farmers, veterinary doctors and the system administrators.

Administrator

The administrator in the system plays the administrative roles of deleting accounts,manage all user details, monitor and make changes to various user activities and mostly accesses all the privileges of the system

Farmers

The farmers roles are to create user accounts, post notifications,diagonize the crops,access farmer information, edit their details,view the specialists, contact specialists

Veterinary doctors

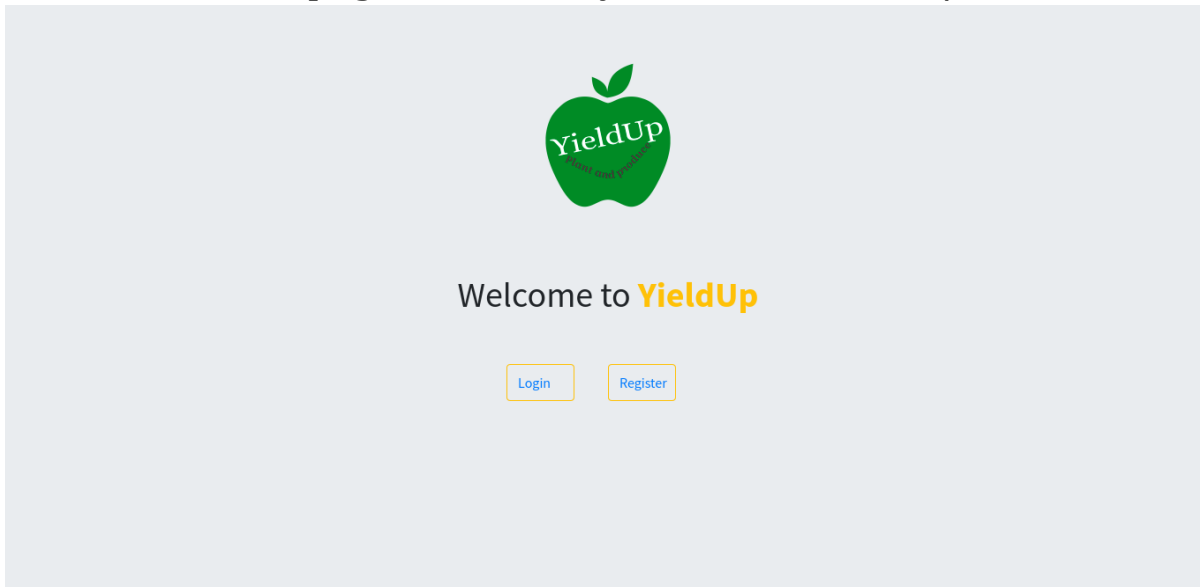
Doctors can create accounts like any other user,post notifications, diagnose the crops, edit user details,

All system users can make comments to the posts

SYSTEM USER INTERFACES

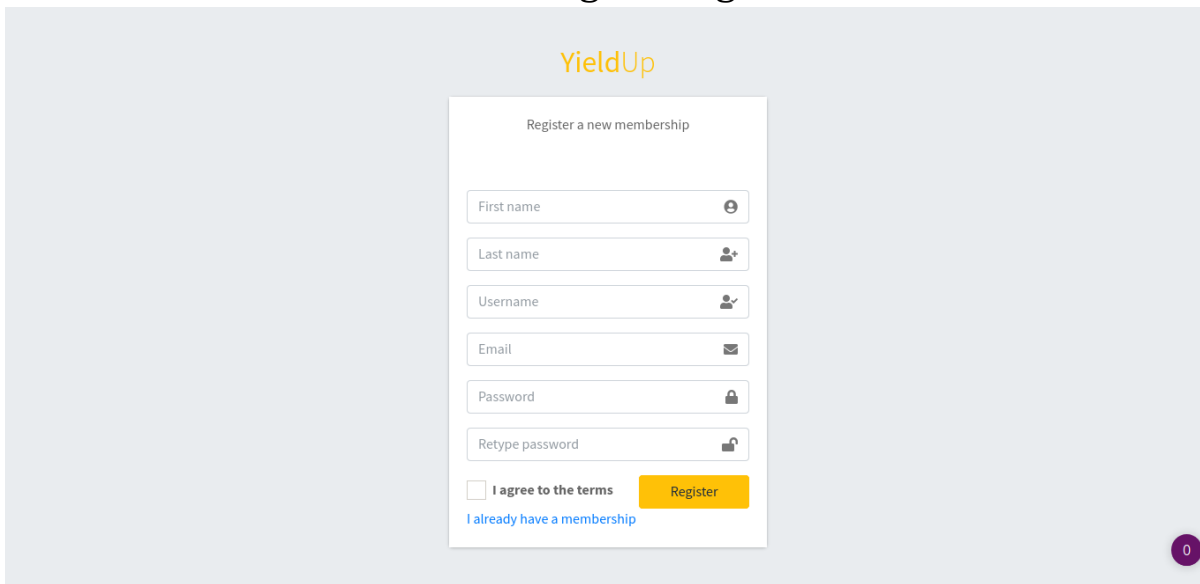
Index/splash page

This is the index page when the system url is loaded/launched



Registration page

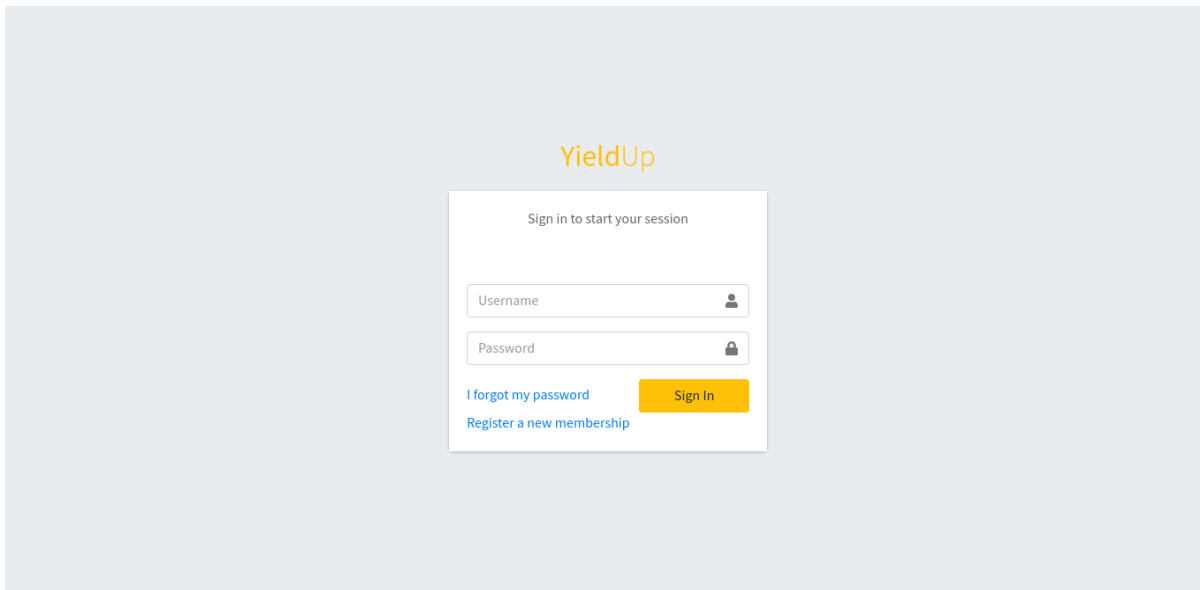
This page is for only new users or first time users of the system. Make sure all fields are filled before clicking the register button



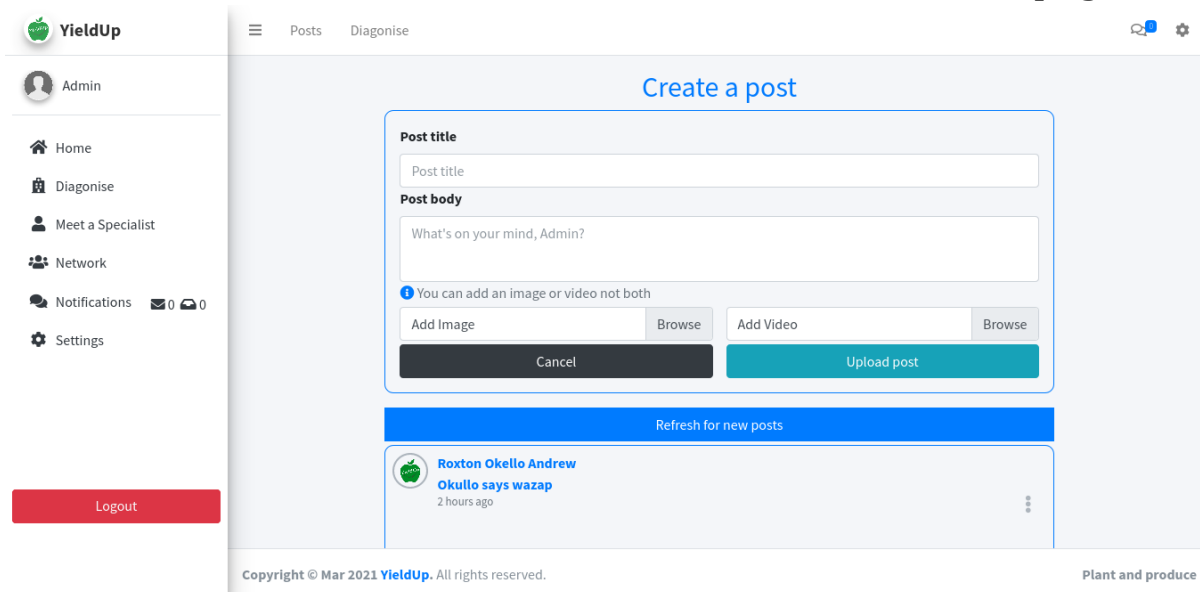
Login page/Sign In page

After registration, users will be referred to the login page

Be sure to use your exact credentials ie username and password and then click the sign in button



Upon login, this the first page the system will display, it consists of the side bar with different buttons that will link the user to other pages,



Menu bar

This is the bar that contains the functionalities of the system that users can be able to do



YieldUp



Andrew Okello



Home



Diagnose



Meet a Specialist



Network



Notifications  1  0

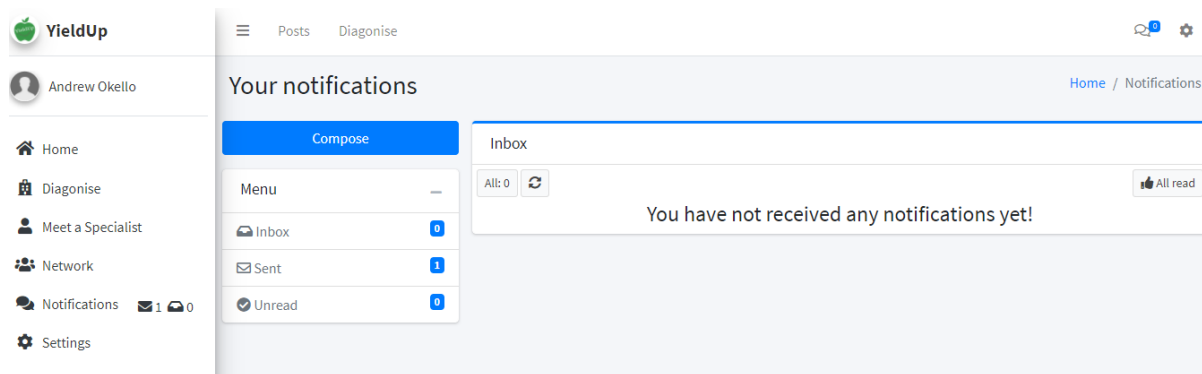


Settings

Logout

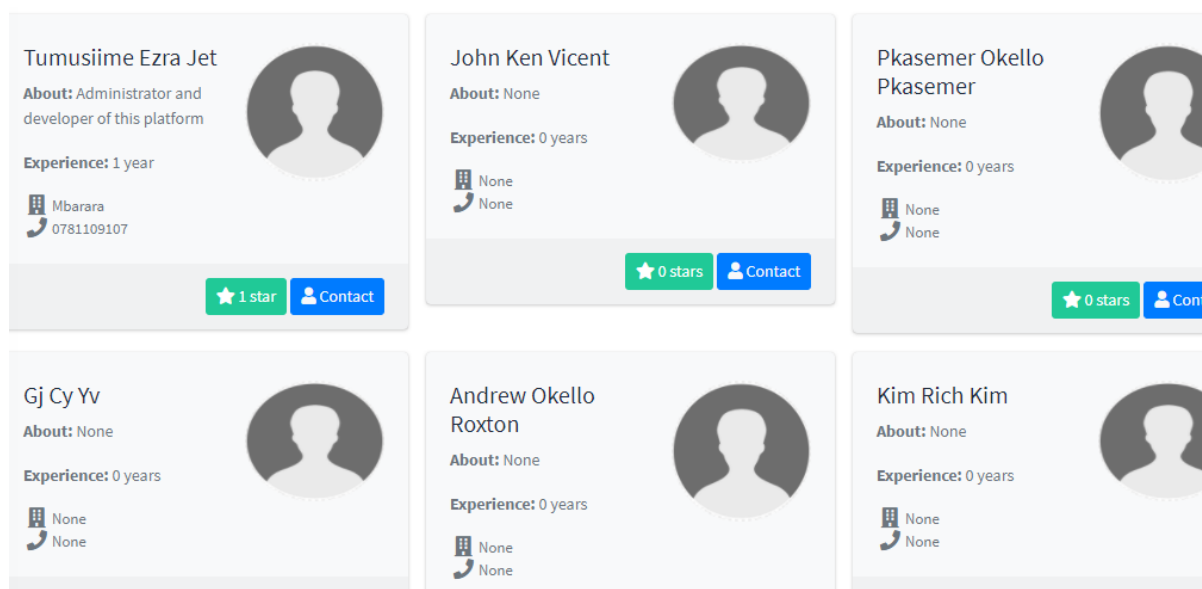
Notifications

This is the page where the user is able to view his messages ie the inbox
unsent sent and unread messages



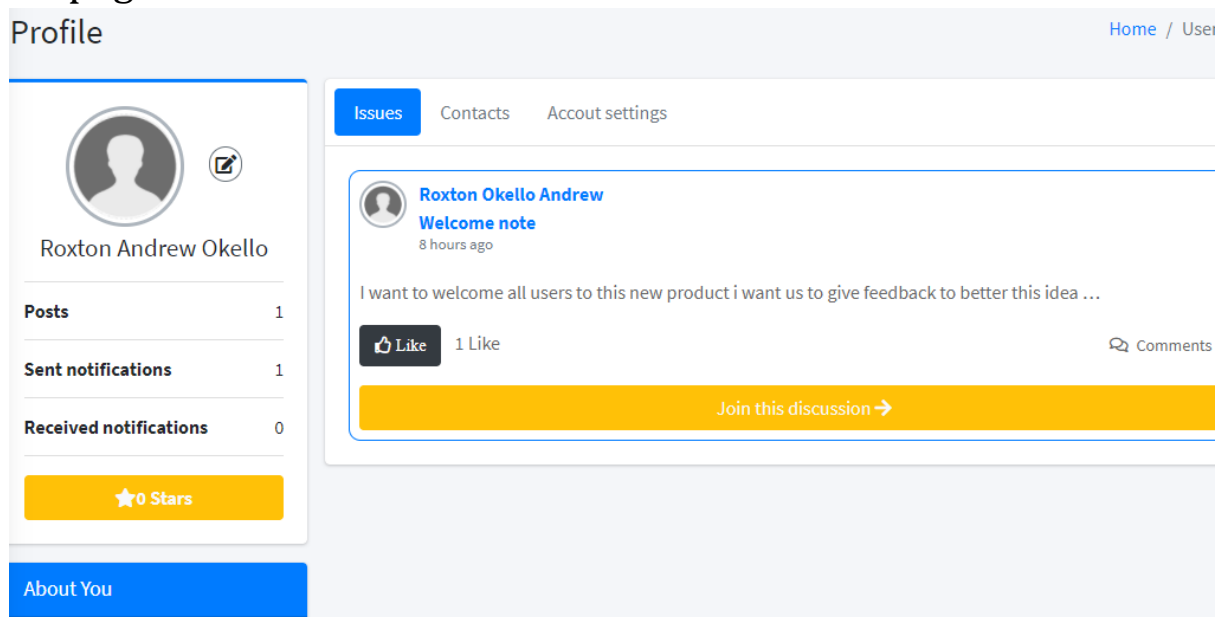
Network

This is the area where the farmer can come and meet other users on the network and be able to reach ou to them



Settings

This is the area where the user can come and make changes to their profile this means he can edit and suit what users can view when they try to view his page



MOBILE APPLICATION

This is the area that does diagnosis of the disease
You will take an image using the mobile app and upload it ,the app gives you a code that you will enter into the web system and the web system will be able to give you a solution

Results



Detected Disease

HealthyLeaf

Accuracy

97.651 %

#2HL

Please enter the above code in the diagnosis part of web application for remedy

Visit web application

4m



A close-up photograph of a large, green, textured leaf, possibly a banana leaf, showing signs of damage or disease. The leaf has a prominent central vein and several lateral veins. The surface is covered in small, dark, irregular spots, which are likely lesions caused by a pathogen. The leaf is set against a background of reddish-brown soil and other green foliage.

HealthyLeaf

97.651 %

#2HL

Please enter the above code in the diagnosis part of web application for remedy

Visit web application

Link to the web application

<https://yieldupp.herokuapp.com/>

Link to Mobile application

<https://drive.google.com/drive/folders/1N1c2BDYwqR9UhPV8GEdZr3M-W9oMwFB>

Test images

<https://drive.google.com/drive/folders/1QdRsCyld1YE5dyLp9DUEHpTwfwWOBTA5>

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