CodeSprint 5.0

The first ever innovation battle based on data science.

PROJECT PROPOSAL TEMPLATE

Team Name	Hypesters
University	Informatics Institute of Technology
Product Name	Paddy Weed Detector

Problem Tackling

In our paddy fields, farmers use so much of weedicides in order to control weeds. People get diseases from using extra amount of weedicides and also using extra amount of weedicides generate huge environment pollution. Normally farmers use weedicides to the whole field without concerning only the weed grown areas because they don't know the exact places where the weeds are, and the weeds are not easy to recognize by farmers in a large paddy field. Our problem is to find a solution to reduce this massive weedicide usage.

Solution

This project aims to build up system to recognize the weed plants in-between the paddy and to generate the map with location showing where are weeds are.

User Scenarios

This project will help farmers to identify weather weed (mahamaruk) is exist or not in the paddy field. It is done by a image that had been taken and put to the project. This project predict weather to use weedicides or not to the fields. This will help to reduce the usage of weedicides. It will protect the nature

Compettor Analysis and discuss on why your product is unique

Our project is focused as a web application which has a simple and clean interface.

User has the ability to insert the image which has/hasn't the weed and our web application is supposed to detect the weed and inform the user telling the picture has the weed or not

We are focusing on a special weed named Echinochloa Crus-Galli" locally (Sri Lanka) known as "MahaMaruk" which has never been done. This weed type was so hard to detect which looks same as the paddy.

Discuss Business Viability and Business Model

The weed identification system is for farmers who cultivate paddy. It's a three month trial period system that farmer able to use in first cultivating season. Most of the farmers are suffering from kidney disease, by the reason of using large amount of weedicides. By this system, farmers are able to find weeds grown areas and the quantity of weedicide to use, to reduce weedicides and diseases.

The records of weed and weedicides will guide them to tracking the road of a item from farmer to customer on blockchain. In the application target crowd is farmers. We are inviting to sponsors who are related in paddy cultivating, are able to address farmers by advertisements.

Discussion of Data Science component

Our data science component is basically an image classifying system using machine learning and data science. When we train our model using an image that what we are going to identify. It will extract the data from the image and train it self according to those data. Then after training the model will identify the weed among the paddy. Also, the system can show the location of the weed from extracting the meta data from the image.

Technologies/Resources Used in the Application

Angular Js

Python

Tensorflow

Open CV

Team Details

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