TEAM 405-FOUND

Problem Statement:-

Application to help farmers with better cropping solutions using weather stats, carbon level detection in soil using ML and data analytics, satellite data and image recognition to find usable patches of land for farmers.

Brief about Project:-

The amount of organic matter, moisture, and field aeration are direct factors in determining crop yield levels.

Soil organic carbon tends to be concentrated in the topsoil. Topsoil ranges from 0.5% to 3.0% organic carbon for most upland soils. Soils with less than 0.5% organic Carbon are mostly limited to desert areas. Soils containing greater than 12–18% organic carbon are generally classified as organic soils.

We will be using satellites for data collection, and image processing to see the usability levels of patches of land that the farmer wants to grow crops on.

Field data collection, Allometric equations for biomass calculations,Vegetation Indices, Regression Equation, etc. will help to finally get the carbon stock emission levels in soil.

Our motive is to build towards sustainable development goals while helping farmers in a primary sector focused country like India, where the majority of the population is working in agriculture related industries. Climate and Sustainable Development related projects are a cause we resonate with and love working on as a team.

Tech Stacks Used:-

- UI - Next.js
- Backend/Server Side - Django
- ML platform - Tensorflow, Keras
- Storage: MongoDB
- Hosting: AWS

Team Members:-

- Sahil S Prabhu
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