Graphics & Multimedia Project.

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**Objective**

Developing a project that can be used to analyze vegetation by Image Processing

**Introduction**

This project aims to help the Agriculture Industry of India by creating a means to analyze the nature of plant life cycle (‘Phenology’) using Image processing & other Graphic techniques.

Using images of agriculture fields, we employ an algorithm to study various characteristics required for successful farming.

**S**tudy & **W**orking

The NDVI Algorithm

* The NDVI Algorithm has been proven to be a powerful tool to learn from past events, monitor current natural-resource conditions, extract canopy biophysical parameters and forecast terrestrial ecosystems on different scales.
* It is an algorithm based on a three-spline function fitted to measured NDVI courses (normalized difference vegetation index) will be used to analyze a given NDVI annual course with respect to leaf shooting and leaf abscission times of deciduous vegetation.
* NDVI is a measure of vegetation vigor, which provides an effective measure of photosynthetically active biomass, and it is calculated as follows:

**NDVI = NIR – R/ NIR + R**

Where NIR and R are the spectral reflectance values in the near infra red and visible red band passes respectively