

Project Design Phase-I
Proposed Solution

Date	9 October 2022
Team ID	PNT2022TMID05476
Project Name	Estimate crop yield using data analytics
Maximum Marks	2 Marks

Proposed Solution:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Problem Statement: Machine Learning based on prior Crop prediction, soil quality analysis to achieve high crop Yield through out technology solution. The main objectives of this project is to predict crop-yield which can be extremely useful to farmers in planning for harvest and sale of grain harvest. Implement a machine learning algorithm that gives better prediction of suitable crop for the corresponding region and crop season in our country.
2.	Idea / Solution description	The solution for the problems involves techniques such as Visualizations, Predictions, Trend analysis. These can be done via IBM Cognos Analytics easily. The main goal to utilize the given data set about the crop yield prediction and store the data in the cloud, So the retail store can use this information to easily predict the crop yield easily and quickly. The retailer can view and maintain his stocks in a visualized manner as per the requirements by using Cognos Analytics Tool which has several functionalities in which the dataset can be handles and maintained with ease.
3.	Novelty / Uniqueness	The uniqueness of this project mainly comes by the way that the data is handled and managed. It allows thorough analysis of crop yield which helps to avoid damage to the crops and also the analysis of the competitive relevant market is possible. By this way, gathering farmer feedback and measuring crop yield results is also possible.
4.	Social Impact / Customer Satisfaction	Social factors affect farming in a number of ways. The type of farming practiced, be it shifting cultivation, subsistence farming, extensive cereal cultivation or mixed farming, etc., is always related to regional social structure. Social factors can also affect the type of crops that are grown.

5.		Crop yield prediction is an essential task for the decision-makers at national and regional levels (e.g., the EU level) for rapid decision-making. An accurate crop yield prediction model can help farmers to decide on what to grow and when to grow.
	Business Model (Revenue Model)	
6.	Scalability of the Solution	<p>One of the precepts of food security is the proper functioning of the global food markets. This calls for open and timely intelligence on crop production on an Agroclimatically Meaningful territorial scale.</p> <p>We propose an operationally suitable method for large-scale in-season crop yield estimations from a satellite image time series (SITS) for statistical production. As an object-based method, it is spatially scalable from parcel to regional scale, making it useful for prediction tasks in which the reference data are available only at a coarser level, such as counties.</p>