**Project Design Phase-I**
**Proposed Solution Template**

| | |
|---|---|
| Date | 19 September 2022 |
| Team ID | PNT2022TMID07696 |
| Project Name | Estimate The Crop Yield Using Data Analytics |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

Project team shall fill the following information in proposed solution template.

| S.No. | Parameter | Description |
|---|---|---|
| 1. | Problem Statement (Problem to be solved) | ❖ This project will analyze the agriculture data and find optimal parameters to maximize the crop production using data Analytics techniques.<br>❖ The dataset consists of features like year, District, crop, season, area, production (in tons), nitrogen(kg/Ha), phosphorus (Kg/Ha), Potassium (Kg/Ha) etc. The major goal of the proposed system is understanding data mining techniques and applying it to the dataset. |
| 2. | Idea / Solution description | Way to increase Crop Production:<br>❖ Quality Of Seeds. Agricultural productivity depends on the quality of seeds with which farmers sow their fields. ...<br>❖ Field Productivity Zoning<br>❖ Monitoring Crops Growth<br>❖ Accurate Weather Prediction. ...<br>❖ Regular Scouting.<br>❖ Crop Protection Methods.<br>❖ Soil Testing & Its Quality. |
| 3. | Novelty / Uniqueness | ❖ Farmers are using data to calculate harvest yields, fertiliser demand, cost savings, and even identifying optimisation strategies for future crops.<br>❖ Smart farming uses data analytics solutions to gather information from multiple farming practices to create algorithms that can be utilised by different farms to create a crop yield that is both fruitful and sustainable.<br>❖ With this knowledge, farmers will be able to better predict activity in the farm and utilise methods that are not |

| | | |
|---|---|---|
| | | only better for their crops but more environmentally sound. |
| 4. | Social Impact / Customer Satisfaction | ❖ Improvements in crop yields have been essential to feed a growing population, while reducing the environmental impact of food production at the same time.<br>❖ By increasing crop yields we can reduce the amount of land we use for agriculture.<br>❖ Crop yields might seem far from being one of the world's largest problems. |
| 5. | Business Model (Revenue Model) | ❖ Agribusiness is the business sector encompassing farming and farming-related commercial activities.<br>❖ It involves all the steps required to send an agricultural good to market, namely production, processing, and distribution. |
| 6. | Scalability of the Solution | ❖ Whether it is crop farming or livestock keeping, farm produce is usually sold by weight. When buying livestock, animals may be put on the scale to ensure that they meet the average weight for that specific breed.<br>❖ As for crops, weighing is a standard practice of the trade. |